

Medi-Dx 7000

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V-sNCT Medi-Dx 7000™ Voltage-actuated Sensory Nerve Conduction Threshold Sensory Electro-Diagnostic · Gold Standard

Neurology · Pain Mgmt · Physical Medicine ·
 Drug/Research Studies



NOTICE: Center for Medicare/Medicaid Services (CMS) memorandum orders Medicare administrators to stop paying for CPT/sNCT (Neurometer) testing. Medi-Dx 7000 / V-sNCT is NOT included in the CMS stop payment order. [Click here to read the CMS memo.](#)

V-sNCT: A Comprehensive Nerve Conduction Study

The first phase of the conventional electrodiagnostic exam is the EMG, which measures muscle response, not nerve conduction. The second phase, NCV, cannot detect changes in function preceding the advanced morbidity it requires to confirm pathology. Since EMG/NCV have been the only methods available they became the "Gold Standard", be it a very poor one. They are only applicable in 20% of patients suspected of peripheral nerve dysfunction. Based on technology dating back to Helmholtz (1850) and Karl Braun's invention of the oscilloscope (1897), they have changed little since the 1950s.

V-sNCT

The basis of V-sNCT goes back even further to Luigi Galvani (1791). Galvani's experiments proved that nerves are voltage sensitive. But not until the mid 1990s was this fully exploited in the invention of the Medi-Dx 7000 V-sNCT device, which applied Galvani's principle to the measurement of sensory nerve function. Previous Current (output) Perception Threshold (CPT/sNCT) methods compared current output to nerve conduction threshold. CPT was sabotaged by the constantly shifting impedance of the body. However, the V-sNCT method measures the actual instigator of nerve conduction - voltage, and this system painlessly gathers enough objective data so measurements of subtle changes that

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• [LSU Medi-Dx 7000 study Accuracy Better Than Any Other Exam For Detecting Nerve-Root Pathology](#)

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• [1930s technology copied by Neurometer and claimed as their invention in bogus patents.](#)

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The Truth About Neurometer®

Neurometer copied 1930s technology and claimed it as their invention to obtain bogus patents.

Neurometer® gave the following reference (Tursky & Waton) to the FDA in their 510 k application. However, two years-later they failed to reveal this information to the US Patent Office, claiming "constant current" and "low frequency - 5 Hz - stimulation" were new inventions of the Neurometer®. Tursky & Watson reference constant current to Boonan and Davidson - 1956 and low frequency (5 Hz stimulus) in a device from the 1930s.

Tursky & Watson: The 1964 study by Bernard Tursky and Peter D. Watson titled: Controlled Physical and Subjective Intensities of Electrical Shock in the journal Psychophysiology; Williams & Wakers Co - 1964 Vol. 1 No 2) contains references to "constant current" and low frequency stimulation (using an identical sinusoidal current as the Neurometer®). They employed the Stimulator, a device manufactured by the Glass Medical Instruments of Quincy, MA, from the 1930s through the early 1970s. The stimulator could be set at any frequency from 0.1 to 10,000 Hz, with various waveform currents. It is interesting how close this device came to being able to do what is now possible with the Medi-Dx 7000™. The Stimulator device represents the apex of technology previous to the introduction of the Medi-Dx 7000™. Tursky & Watson's 1964 study makes for very interesting reading. [Click here for additional information.](#)

- [Comparison: Old 1920s CPT and V-sNCT](#)

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State-Of-The-Art prior to the MEDI-DX 7000™ Tursky & Watson (1964)

Neurometer copied 1930s technology and claimed it as their invention to obtain bogus patents.

Tursky, B., Watson, P.D. **Controlled Physical and Subjective Intensities of Electric Shock.** *Psychophysiology*, Volume 1(2):151-162, 1964.

1. The following article was given to the FDA in 1978 by Neurometer in their 510-K application. The article makes reference to circuits for "constant current" published by Davidson & Boonin in 1956 (see Tursky & Watson pg. 151), and the use of any frequency from 0.1 to 10,000 Hz (pg 152). Two years after giving this reference to the FDA, Neurometer's "inventor" claimed exclusive right these as his "inventions" and with the help of his cousin/attorney, who is now the president of the company, they obtained bogus patents. This is rather a moot point since these bogus patents expired in December 1998, but it does show the type of people behind the Neurometer. The fact is that it is not necessary to use a mechanism to compensate for skin resistance in order to obtain accurate sensory nerve conduction threshold measures and, as Tursky & Watson found, these mechanisms did not allow accurate measurement of sensory thresholds in the first place. It is sure to be argued that Tursky & Watson did not use neuroselective frequencies, but a 60 Hz current. They were unaware of the neuroselectivity offered by 5, 250 and 2000 Hz frequencies ranges, however, this makes no difference, since Tursky & Watson and all subsequent methods used a testing protocol that was flawed (see #2 below).
2. It will be noted that Tursky & Watson's protocol, and subsequent methods/devices, employed bursts of current above and below the threshold to zero-in on the threshold. This was been a universal error made before the

advent of the Medi-Dx 7000TM. You will note that Tursky & Watson reported that threshold measures were not as consistent as pain tolerance levels. Until the Medi-Dx 7000TM, no one had related this to the fact that the threshold will shift when over stimulated. Nor did anyone realize that the electrical resistance could be above the threshold. All of which would have no bearing on pain tolerance measurement, which Tursky & Watson and later devices were quite capable of measuring.

3. The Medi-Dx 7000TM uses a combination of patented technology that is completely unique; 1. A more recognizable current waveform, 2. A single test electrode (distanced from the ground by several inches or feet), 3. A pattern analysis nomogram that uses the patient as his own control and, 4. A protocol that does not stimulate over the threshold. This makes the Medi-Dx 7000TM, not only the fastest, but the most reliable device to measure sensory nerve conduction threshold. Additionally, since the measurements are within such a close range, any attempt at malingering is easily detected. Therefore, the Medi-Dx 7000TM examination is objective, even though it is based upon the patient's subjective response.

THE DYNAMICS OF ELECTRICAL RESISTANCE AND CURRENT FLOW:

Once a current begins flowing it will continue to flow even if the intensity is turned below the "resistance threshold". Only if the intensity is turned far below the resistance threshold (30% or lower) will it cease flowing. The Medi-Dx 7000TM protocol takes advantage of this law of current flow by turning the intensity up until the subject reports feeling the stimulus and then turning it back, but not more than 50%. Because the test electrode is not lifted from the test site, subsequent tests the intensity give the actual nerve conduction threshold. This makes the constant current mechanism unnecessary, since the current continues to flow below nerve conduction threshold, and if the first reading was above the threshold, due to a higher skin resistance, the subsequent measures are accurate measures of the actual sensory nerve

conduction threshold.

4. It is easy to see why the 1964 study of Tursky & Watson is considered the high-water mark prior to the introduction of the technology found in the Medi-Dx 7000TM device and protocol. Basically, all interim studies and devices were merely repeating what Tursky & Watson and their predecessors had established.

At the end of the Tursky & Watson article will be found a copy of the inside cover page of the publication from which their article came. This page advertises the "Stimulator" made by the Grass Medical Instrument Company, of Quincy, Massachusetts. This is the instrument, which was available from the early 1930s to 1970s, that Tursky & Watson used in their study. The Stimulator was not patented, since all of its technology came from published experiments. The Stimulator encompasses all the technology decades later to be claimed by Neurometer, which when compared to the Stimulator device is obviously a cheap copy.

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Comparison: Old 1920s CPT and V-sNCT

Statements in the left hand column include published comments from a review of the Neurometer® published by the American Association of Electrodiagnostic Medicine (AAEM) in the September, 1999 issue of *Muscle & Nerve*. The comparisons in the right column are not AAEM published opinions, but are taken from FDA submissions, statements from the manufacturer, and users of the Medi-Dx 7000™.

Latest Technical Review of Pre-Medi-Dx 7000™ Technology

1900-1956	2000 +
Old CPT Technology	Improvement over Old Technology
<p>NEUROMETER® CPT Literature Summary</p> <ol style="list-style-type: none"> 1. Neurometer® CPT device arbitrarily assigns various degrees of dysfunction from a normal population as grades of severity. These ratios are difficult to interpret given the current state of knowledge about this technique. 2. ...lacks localizing value and can reflect abnormality at any site along the pathway. Therefore, the technique is limited in its ability to distinguish 	<p>MEDI-DX 7000™ V-sNCT COMPARISON</p> <ol style="list-style-type: none"> 1. The Medi-Dx 7000™ uses a pattern nomogram, in which the patient is his own control. This graphic analysis is easy to understand. It does not depend upon ratios and comparisons with normal population data. It uses a nomogram that compensates for the naturally hyper- or hypoesthetic individuals. Type A-delta exam protocol uses a clinically established

between anatomic site of peripheral nerve injury.

3. the Neurometer® CPT test will generally fail to result in a reproducible score.

Excludes certain classes of patients from investigation (such as children, those too weak to communicate, and the comatose patient) even in the comatose patient.

"deviation index" that assigns the greatest emphasis to the most hypoesthetic (dysfunctional) nerve(s). Follow-up exams monitor patient progress and secondary lesions.

2. The greater number of nerve sites the Medi-Dx 7000™ can test helps localize lesions by allowing mapping of multiple nerve branches.

3. The patented V-SNCT electrode system allows reproducible scores within such a narrow range that malingering is quite easy to detect by a technician with minimal experience. Children are quite easy to examine with V-SNCT. The technician plays the "Tickle Game." The child is asked: "Tell when you feel the tickle, but don't laugh too loud we don't want to disturb the people in the next room." As for the comatose patient, This is a very rare situation. NDA.

Inc. finds this negative comment in an otherwise objective review a demonstration of the AAEM's bias toward EMG-type technology. The fact is that CPT does not even come close V-sNCT's clinical utility. However, CPT is probably as effective as EMG. The point is that EMG-type methods, if fairly reviewed, would be found to be as ineffective as CPT. Every EMG text reports that EMG is only useful to confirm lesions; it is not useful in locating lesions, as is V-sNCT. NDA, Inc. believes that EMG/NCV are useful modalities for quantifying the state of degeneration in neuropathies, but the limitations of EMG/NCV are obvious and should be recognized.

Medi-Dx 7000™ V-sNCT - ONE-OF-A-KIND TECHNOLOGY

Medi-Dx 7000™ measures the electric component that initiates the change in nerve membrane potential causing nerve impulse propagation.

TRUTH: The Neurometer® is a rather poor copy of devices from the 1920s, a time in which it was mistakenly surmised that the skin's electrical resistance was constant. The Medi-Dx 7000™ V-sNCT device is the only device that measures the electric component that initiates nerve impulses- the voltage intensity. Voltage initiates the change in nerve membrane potential that causes the propagation of nerve impulse (voltage-gated calcium channels). The Neurometer® measures current output, which is shifts with the skin's constant natural fluctuations in the electrical resistance. Neurometer's constant current mechanism (developed in the 1950s by Davidson and Boonan) maintains current flow between serial tests, but cannot compensate for the skin's fluctuating resistance that adversely affects measurement reproducibility. Any first year medical students know that the skin resistance fluctuates. For example, GSR, Galvanic Skin Resistance, which is one of a battery of tests in the Lie-Detector, measures this fluctuation. Voltage intensity is a direct measure of threshold, while current output is indirect and, therefore, not reproducible, as the American Association of Electrodiagnostic Medicine noted in their review of the Neurometer®.

OVER 25% OF MEDI-DX 7000™ PURCHASERS ALREADY OWNED A NEUROMETER®

WHAT NEUROMETER® STUDIES SHOW:

We have found that few have actually read the Neurometer® abstract booklet. What is found are many studies by the "inventor", studies of polyneuropathies(diabetic and toxic, which are not very practical for pain mgmt, orthopedic practices, etc.), and many titles that contain the words "Neuropathy" and "Radiculopathy" but concern alcoholic, metabolic, toxic and chronic nephritis conditions. There are only a few concerning peripheral neuropathy or radiculopathy. These generally support Neurometer® effectiveness on a par with EMG, but EMG is only about 10% effective overall in detecting

nerve morbidity, based on the fact that 80% of suspected patients are NOT selected as EMG candidates. Of the 20% selected < 50% show morbidity. Meanwhile, Medi-Dx studies are all showing sensitivity in the 95%+ range in early or late stages of nerve pathology and on patients that would not be selected as good EMG subjects.

NEUROMETER® SIMULTANEOUSLY CLAIMED THAT THE MEDI-DX 7000™ DID NOT WORK, AND AT THE SAME TIME INFRINGED ON NEUROMETER® PATENTS?

In early 1998, within weeks of the Medi-Dx 7000™ receiving FDA marketing clearance, Neurometer® began passing out leaflets claiming the Medi-Dx was fraudulent. Simultaneously they sent letters to Medi-Dx users accusing NDA of patent infringement and demanding \$10,000 from each user. Only after NDA filed a federal libel and slander action, did Neurometer® stop their unfounded claim of patent infringement. In the process, NDA, through the freedom of information act, discovered some very interesting things about Neurometer® and their patents.

WERE NEUROMETER® PATENTS FRAUDULENT?

Neurometer® patents claim a "constant current mechanism" and the use of "5 Hz stimulus" were unique to the Neurometer®. However, two years earlier their 510K application referenced articles in the literature that revealed that "constant current mechanisms" were in use in the 1950s, and "5 Hz" was in use in the 1930s. Neurometer®'s "inventor" and his attorney (who is now Neurometer's president) did not reveal these facts to the patent officer who granted the patent. Neurometer® patents all expired in late 1998.

NEUROMETER® CLAIMS THAT THE MEDI-DX HAS A DIFFERENT WAVEFORM AND CURRENT OUTPUT - SO TRUE!

NDA, Inc. is happy to say that this is true. Of course, it is different, that's why it works better? The patented waveform current is unique for each setting. Though the settings are 5-250 and 2000 Hz the actual frequencies are made up of combinations unique to each nerve type. This has completely confounded Neurometer's contract engineers. Our in-house certified engineer finds their comparison comical. It would take extremely sophisticated electronic testing equipment to measure the patented waveform and

modulations. To compare this with the simple sinusoidal waveform of the Neurometer is a joke. They did get one thing correct: The Medi-Dx is completely different from the Neurometer®.

In Neurometer® patents they described their sinusoidal waveform as "comfortable". It is also simple and cheaply made. But most importantly, a comfortable current is difficult to recognize within a narrow range. The patented Medi-Dx 7000™ digitized, modulated current is square waveform on 250 Hz and has multiple modulations of the 5 and 2000 Hz. Their exact characteristics are proprietary. But one thing is sure: The Medi-Dx 7000 works better than any previous sensory threshold measurement device. It does what the Neurometer® promised and never delivered.

Apparently, Neurometer® obtained a copy of NDA's FDA 510 k application and saw that we used an identical waveform current to theirs. But following FDA marketing clearance, we were granted our patent for the new modulated waveform current and FDA regulations allow changes -without application for clearance- if the changes do not affect operation/effectiveness or safety. Ask some of the over 25% of Medi-Dx purchasers who previously had Neurometer® devices, they can tell you about the difference this current, electrode system and method makes. That's why they brought the Medi-Dx 7000 and tossed the Neurometer®

There is only one V-sNCT Device: **MEDI-DX 7000™ - A CLASS BY ITSELF - FAST- ACCURATE - PRACTICAL**

Comparison: MEDI-DX 7000™ V-sNCT vs. Neurometer®

MEDI-DX 7000™ V-sNCT	Neurometer®
Straightforward protocol	Complex protocol, i.e. asks operator to "shake the cables" and test circuit integrity

No clipping or short-circuits are possible	Clipping is common and requires cleaning the skin and electrodes, with repasting and starting over again, i.e. "shake the cables", etc.
Graphic analysis is understandable to physicians, patients, adjusters, judges and jurors	Analysis is complex mathematical calculation that must be performed by a computer driven software program.
Findings are placed in a narrative report that is computer generated in about three minutes	Findings presented in a sheet of numerical symbols.
Patented single electrode system tests single digital nerves to detect early single branch dysfunction in peripheral entrapments	Uses dual electrode system that tests both digital branches simultaneously. Normal branch conceals abnormal hypoesthetic branch lesions.

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BEDFORD AVE. CHIROPRACTIC & REHABILITATION, PC
233 BEDFORD AVENUE
BELLMORE, NY 11710
516-781-9500

Letter of Medical Necessity for V-sNCT Testing

Re: Monolakis, Emmanouil
DOA: 07/22/02

Emmanouil Monolakis presented to my office for treatment due to injuries sustained in an automobile accident, which occurred on July 22, 2002. He was in a vehicle that was involved in a collision. At the moment of impact, he was shaken and jolted. He sustained injuries to his head and neck.

Diagnosis:

723.4 - Cervical Radiculopathy

Emmanouil Monolakis was examined in our office on September 13, 2002 and continues to complain of neck pain and stiffness, pain radiating into his shoulders and arms, difficulty sitting and sore and spastic muscles.

Due to Mr. Monolakis's condition, I feel at this time, that further diagnostic testing is medically necessary to better isolate the cause of his condition. He is being referred for V-sNCT Testing in order to detect and quantify the presence of any neuropathies or radiculopathies. V-sNCT testing will assess sensory nerve function and will allow for early targeted intervention before morbidity can jeopardize outcome. I have referred Emmanouil for V-sNCT testing of the Cervical Spine.

My professional clinical opinion is that this test is in the best interest of my patient and it is therefore, medically necessary in Emmanouil's case to objectively substantiate and document my clinical findings. The findings of the V-sNCT Test will help me to better understand my patient's condition and will help me to also direct care in a more specific and beneficial manner.

Respectfully yours,

Dr. Tara O'Brien, DC

SLAMOWITZ CHIROPRACTIC CENTER
279 BURNSIDE AVENUE
LAWRENCE, NY 11559
516-371-3745

Letter of Medical Necessity for V-sNCT Testing

Re: Louis, Cynthia
DOA: 07/12/02

Cynthia Louis presented to my office for treatment due to injuries sustained in an automobile accident at work, which occurred on July 12, 2002. She was in a vehicle that was involved in a collision. At the moment of impact, she was shaken and jolted. She sustained injuries to her head and neck.

Diagnosis:

723.4 -- Cervical Radiculopathy
781.0 -- Headaches
728.85-- Cervical Myospasm

Cynthia Louis was examined in our office on September 25, 2002 and continues to complain of neck pain and stiffness, pain radiating into her shoulders and arms, numbness in her hands, and sore and spastic muscles.

Due to Ms. Louis's condition, I feel at this time, that further diagnostic testing is medically necessary to better isolate the cause of her condition. She is being referred for V-sNCT Testing in order to detect and quantify the presence of any neuropathies or radiculopathies. V-sNCT testing will assess sensory nerve function and will allow for early targeted intervention before morbidity can jeopardize outcome. I have referred Cynthia V-sNCT testing of the Cervical Spine.

My professional clinical opinion is that this test is in the best interest of my patient and is therefore, medically necessary in Cynthia Louis's case to objectively substantiate and document my clinical findings. The findings of the V-sNCT Test will help me to better understand my patient's condition and will help me to also direct care in a more specific and beneficial manner.

Respectfully yours,


Dr. Mark Slamowitz, DC

C2

CENTRAL AVENUE CHIROPRACTIC, PC
499 Beach 20th Street
Far Rockaway, N.Y. 11691
718-327-5011

July 13/2000

Re: Samuel McCullough
Date of Accident: 04/20/00

Mr. McCullough was examined in our office on 07/13/00 and has been exhibiting the clinical signs of spinal nerve root radiculopathy/neuropathy since his accident on 04/20/00. Mr. McCullough has been complaining of symptoms radiating into his bilateral lower extremities. The clinical impression is consistent with suspected bilateral spinal nerve root radiculopathy and/or neuropathy secondary to trauma.

I feel that further diagnostic testing is therefore medically necessary to better isolate the cause of his condition. Since sensory nerves are more vulnerable to injury than motor nerves, I have referred Mr. McCullough for CPT testing which can detect and isolate nerve dysfunction in a non-invasive manner early on, before chronic nerve degeneration or pathology sets in. It is for this reason that I have referred my patient for CPT testing to detect the presence of these early changes and, if present, direct treatment to the specific causative spinal lesion resulting in improved clinical outcome. (This test provides nerve-root specific information in order to help direct treatment to the isolated areas of suspected vertebral unit dysfunction). It is therefore in the best interest of the patient that this test is performed in order to define and focus his treatment plan.

This evaluation is a painless, non-invasive sensory test. In the event that this test reveals nerve impairment, this test provides nerve-root specific information in order to help direct treatment to the isolated areas of suspected vertebral unit dysfunction. Injured somatosensory nerves can regenerate with appropriate therapeutic intervention. If this test does reveal nerve impairment, further standard testing (NCV and/or EMG) will be ordered to determine whether chronic or permanent nerve damage has occurred to the larger nerve fibers.

My professional clinical opinion is that this test is medically necessary in this case to objectively substantiate and document my clinical findings. Additionally, these measures assist in establishing an optimal treatment protocol for Mr. McCullough and document the outcome of the therapeutic intervention. When abnormal, the patient may respond to nerve blocks as a therapeutic intervention.

Respectfully yours,


Dr. Christopher J. Green

RECEIVED

AUG 22 2000

LAKEVILLE GRO
123456789



CENTRAL AVENUE CHIROPRACTIC, P.C.
DR. CHRISTOPHER J. GREEN

1600 Central Ave.
Far Rockaway, NY 11691
Telephone: (718) 327-5011
Fax: (718) 327-1156

May 23, 2000

Re: Sam McCullogh
Date of Accident: 04/20/00

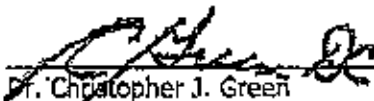
Mr. McCullogh was examined in our office on 05/23/00 has been exhibiting the clinical signs of spinal nerve root radiculopathy/neuropathy since his accident on 04/20/00. Mr. McCullogh has been complaining of symptoms radiating into his upper extremities. The clinical impression is consistent with suspected Cervical/Brachial Syndrome, 723.3 and Myofascitis, 729.1 secondary to trauma.

I feel that further diagnostic testing is therefore medically necessary to better isolate the cause of his condition. Since sensory nerves are more vulnerable to injury than motor nerves, I have referred Mr. McCullogh for CPT testing which can detect and isolate nerve dysfunction in a non-invasive manner early on; before chronic nerve degeneration or pathology sets in. It is for this reason that I have referred my patient for CPT testing to detect the presence of these early changes and, if present, direct treatment to the specific causative spinal lesion resulting in improved clinical outcome. (This test provides nerve-root specific information in order to help direct treatment to the isolated areas of suspected vertebral unit dysfunction). It is therefore in the best interest of the patient that this test is performed in order to define and focus his treatment plan.

This evaluation is a painless, non-invasive sensory test. In the event that this test reveals nerve impairment, this test provides nerve-root specific information in order to help direct treatment to the isolated areas of suspected vertebral unit dysfunction. Injured somatosensory nerves can regenerate with appropriate therapeutic intervention. If this test does reveal nerve impairment, further standard testing (NCV and/or EMG) will be ordered to determine whether chronic or permanent nerve damage has occurred to the larger nerve fibers.

My professional clinical opinion is that this test is medically necessary in this case to objectively substantiate and document my clinical findings. Additionally, these measures assist in establishing an optimal treatment protocol for Mr. McCullogh and document the outcome of the therapeutic intervention. When abnormal, the patient may respond to nerve blocks as a therapeutic intervention.

Respectfully yours,


Dr. Christopher J. Green

RECEIVED

AUG 14 2000

THOMAS WIGGINS
LAKEVILLE, OR.

ATLANTIC MEDICAL & WELLNESS, P.C.
882-884 Atlantic Avenue
Brooklyn, NY 11238
718-622-5860



32-0373-976 NR

August 15, 2001

Re: Donica English
Date of Accident: 07/15/01

Ms. English was examined in our office on 08/15/01 and has been exhibiting the clinical signs of spinal nerve root radiculopathy/neuropathy since her accident on 07/15/01. Ms. English has been complaining of symptoms radiating into her bilateral upper extremities. The clinical impression is consistent with suspected bilateral spinal nerve root radiculopathy and/or neuropathy secondary to trauma.

I feel that further diagnostic testing is therefore medically necessary to better isolate the cause of her condition. Since sensory nerves are more vulnerable to injury than motor nerves, I have referred Ms. English for CPT testing which can detect and isolate nerve dysfunction in a non-invasive manner early on; before chronic nerve degeneration or pathology sets in. It is for this reason that I have referred my patient for CPT testing to detect the presence of these early changes and, if present, direct treatment to the specific causative spinal lesion resulting in improved clinical outcome. (This test provides nerve-root specific information in order to help direct treatment to the isolated areas of suspected vertebral unit dysfunction). It is therefore in the best interest of the patient that this test is performed in order to define and focus her treatment plan.

This evaluation is a painless, non-invasive sensory test. In the event that this test reveals nerve impairment, this test provides nerve-root specific information in order to help direct treatment to the isolated areas of suspected vertebral unit dysfunction. Injured somatosensory nerves can regenerate with appropriate therapeutic intervention. If this test does reveal nerve impairment, further standard testing (NCV and/or EMG) will be ordered to determine whether chronic or permanent nerve damage has occurred to the larger nerve fibers.

My professional clinical opinion is that this test is medically necessary in this case to objectively substantiate and document my clinical findings. Additionally, these measures assist in establishing an optimal treatment protocol for Ms. English and document the outcome of the therapeutic intervention. When abnormal, the patient may respond to nerve blocks as a therapeutic intervention.

Respectfully yours,



Dr. Aziz

PEACHTREE CHIROPRACTIC, P.C.
2325 Arthur Avenue
Bronx, NY 10458
718-933-2545



32-0377-506 NR

August 22, 2001

Re: Pearleen Frederick
Date of Accident: 06/23/01

Mrs. Frederick was examined in our office on 08/22/01 and has been exhibiting the clinical signs of spinal nerve root radiculopathy/neuropathy since her accident on 06/23/01. Mrs. Frederick has been complaining of symptoms radiating into her bilateral lower extremities. The clinical impression is consistent with suspected bilateral Strain/Sprain, 847.2 secondary to trauma.

I feel that further diagnostic testing is therefore medically necessary to better isolate the cause of her condition. Since sensory nerves are more vulnerable to injury than motor nerves, I have referred Mrs. Frederick for CPT testing which can detect and isolate nerve dysfunction in a non-invasive manner early on; before chronic nerve degeneration or pathology sets in. It is for this reason that I have referred my patient for CPT testing to detect the presence of these early changes and, if present, direct treatment to the specific causative spinal lesion, resulting in improved clinical outcome. (This test provides nerve-root specific information in order to help direct treatment to the isolated areas of suspected vertebral unit dysfunction). It is therefore in the best interest of the patient that this test is performed in order to define and focus her treatment plan.

This evaluation is a painless, non-invasive sensory test. In the event that this test reveals nerve impairment, this test provides nerve-root specific information in order to help direct treatment to the isolated areas of suspected vertebral unit dysfunction. Injured somatosensory nerves can regenerate with appropriate therapeutic intervention. If this test does reveal nerve impairment, further standard testing (NCV and/or EMG) will be ordered to determine whether chronic or permanent nerve damage has occurred to the larger nerve fibers.

My professional clinical opinion is that this test is medically necessary in this case to objectively substantiate and document my clinical findings. Additionally, these measures assist in establishing an optimal treatment protocol for Mrs. Frederick and document the outcome of the therapeutic intervention. When abnormal, the patient may respond to nerve blocks as a therapeutic intervention.

Respectfully yours,

Dr. Christopher Montana

HEM. STEAD PAIN & MEDICAL SERVICES P.C.

ELSIE COLIN M.D. • ANNE BRUTUS M.D.

135 Main Street, N.Y. 11550

516-485-2225

C3

Examination Date: 7/7/00

Re: Javier Ramos

DOA: June 2, 2000

LETTER OF MEDICAL NECESSITY FOR CPT TESTING

Mr. Ramos has been exhibiting the clinical signs of spinal nerve root radiculopathy/neuropathy since her accident on June 2, 2000. The patient has been complaining of neck pain that radiates to the left shoulder and arm. The clinical impression is consistent with suspected cervical nerve root compression secondary to trauma. I feel that further diagnostic testing is necessary to better isolate the cause of his condition.

In order to differentially diagnose the extent and severity of the patient's condition and develop the most efficient treatment plan, an electrodiagnostic sensory nerve study was performed. This test, a neuroselective Current Perception Threshold (CPT) evaluation, quantifies the functional integrity of both the large and small afferent (sensory) nerve fibers. The physiologic integrity of the peripheral nerves representing the suspected dermatomes (spinal segments) or sites of nerve impairment involved were tested as well as the adjacent areas of the suspected region to rule out any contributory factors. The distribution of graded values permits the differentiation between sensory nerve impairment resulting from radiculopathic (spinal nerve root irritation) or compressive etiologies, as well as focal mononeuropathy of a traumatic etiology.

AUG 1 2000

This evaluation is a painless, non-invasive sensory test. In the event that this test reveals nerve impairment, this test provides nerve root specific information in order to help direct treatment to the isolated areas of suspected vertebral unit dysfunction. Injured somatosensory nerves can regenerate with appropriate therapeutic intervention. If this test does reveal nerve impairment, further standard testing (NCV and/or EMG) will be ordered to determine whether chronic or permanent nerve damage has occurred to the larger nerve fibers.

This test is necessary in this case to objectively substantiate and document my clinical findings. Additionally, these measures assist in establishing an optimal treatment protocol for Mr. Ramos and document the outcome of therapeutic intervention.

Respectfully yours,

Anne Brutus

Anne Brutus, MD CPMR

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**Triboro Medical Of New York, P.C.
2323 First Avenue
New York, N.Y. 10035
(212) 722-5889**

12/02/99

Re: Angelo Santos

Date of Accident: 06/05/99

Mr. Santos was examined in our office on 12/02/99, and found to have pain and tingling radiating into his upper extremities. The clinical impression was consistent with suspected spinal nerve root radiculopathy/neuropathy.

Angelo has been exhibiting the clinical signs of spinal nerve root radiculopathy/neuropathy since the accident on 06/05/99 and has not progressed as well as expected under conservative care to this point. I feel that further diagnostic testing is therefore necessary to better isolate the cause of his condition.

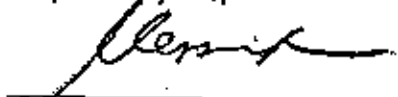
In order to differentially diagnose the extent and severity of Mr. Santos's condition and develop the most efficient treatment plan, an electrodiagnostic sensory nerve study was performed. This test, a neuroselective Current Perception Threshold (CPT) evaluation, quantitates the functional integrity of both the large and small afferent (sensory) nerve fibers. The physiologic integrity of the peripheral nerves representing the suspected dermatomes (spinal segments) or sites of nerve impairment involved were tested as well as the adjacent areas of the region to rule out any contributory factors. The distribution of graded values permits the differentiation between sensory nerve impairment resulting from radiculopathic (spinal nerve root irritation) or compressive etiologies, as well as focal mononeuropathy of a traumatic etiology.

This test will provide nerve-root specific information in order to help direct treatment to the isolated areas of suspected vertebral unit dysfunction.

This evaluation is a sensory test. Injured somatosensory nerves can regenerate with appropriate therapeutic intervention. Follow-up testing is necessary in order to establish that a sensory impairment is permanent and in the event that a NCV was performed, CPT testing confirms permanent impairment.

My professional clinical opinion is that this test was medically necessary in this case to objectively substantiate and document my clinical findings. Additionally, these measures assist in establishing an optimal treatment protocol for Mr. Santos and document the outcome of the therapeutic intervention. When abnormal, the patient may respond to nerve blocks as a therapeutic intervention.

Respectfully yours,



Dr. Roumi

RECEIVED

JUN 02 2000

JEAN CHAMBLIN
URGENT CARE

HOSS MEDICAL SERVICES, PC
 PO BOX 8
 ATLANTIC BEACH, NY 11509
 (516) 371-2674

Electrodiagnostic Examination Report

Patient Information

Name: Louis, Cynthia
 Date of Accident: 07/12/02
 Date of Exam: 9/25/02
 Referring Doctor: Dr. Slomowitz, DC
 Date of Report: 10/02/02

Study: Cervical Distribution: V-sNCT, Voltage-actuated Sensory Nerve Conduction Threshold

EXAMINATION:

ELECTRODIAGNOSTIC SENSORY NERVE THRESHOLD AMPLITUDE W/O VELOCITY (PERCEPTION THRESHOLD CERVICAL SPINAL NERVE ROOTS)

TECHNOLOGY & ANALYTIC PROTOCOL

It has been well established that sensory nerves are more vulnerable to injury than motor nerves and the CPT test detects subtle changes to sensory function which are altered weeks, months and in some cases even years before the development of motor nerve degeneration, which EMG requires to detect pathology. In the detection of these early morbid changes, the CPT uses specific frequencies to assess a broad spectrum of sensory function in the pre and postganglionic fibers. Conventional EMG is limited mainly to the more traumatically resistant large postganglionic motor fibers. One of the many advantages of the CPT test is that it allows early targeted intervention before morbidity can jeopardize outcome. Federal Medicare guidelines list Current Perception Threshold (CPT) as "reasonable and necessary" in a wide variety of sensory conditions ranging from diabetic polyneuropathies and peripheral entrapment neuropathies to neck and back pain (radiculopathies).

SE-CPT ANALYTIC PROTOCOL:

The analytic protocol used here is the most conservative classification system. It is based upon measurements in the broad functional spectrum offered by the 250Hz Frequency test. Measurements are rated above (hypoesthesia) and below (hyperesthesia) the mean population range of current perception threshold, after adjusting the overall patient to correct for individual idiosyncrasies (reducing false positive tests.)

HYPOESTHESIA: Hypoesthesia is the most serious dysfunction. A rating of +1 (mild) is applied to a level measuring +0.9 mA over the mean, +2 (moderate) = +1.1 mA over mean, +3 (marked) = +1.4 mA over mean, +4 (severe) = +1.7 mA over mean, +5 (very severe) = 2.0 mA or more over mean. Contralateral deviations of more than 20% are considered to be indicative of greater severity than the basic rating analysis protocol indicate.

HYPERESTHESIA: The rating of hyperesthesia is applied to any level that is measured at less than 0.9mA of the adjusted mean pattern. No grading system is applied.

ASYMMETRY/DEVIATION: Asymmetry discovered within a given nerve root is measured and reported on when the deviation from right to left is significant (>20%) and is clinically relevant, i.e., it approximates another nerve roots lesion (usually strong hypoesthesia) either directly superior or directly inferior to the nerve root noted as having such a deviation. The relevance is that the hypoesthesia of the neighboring nerve root may be influencing via shared fibers the nerve root with the measurable asymmetry and may help explain why a patient complains of symptomatology in a nerve roots distribution that has grossly normal raw data readings. This information, when reported as present, should be considered clinically.

Type A-delta fiber Deviation Index: After measures are adjusted to the population average mean (best-match), sensory deafferentation (hypoesthesia) is rated as +1-Mild when a measure is > 0.9 mA above the mean. Ratings of +2-Moderate, +3-Marked, +4-Severe and +5-Very Severe are progressively > 0.9 mA above +1-Mild. Normal to Moderate findings are considered more significant in the presence of a contralateral deviation > %. The most severe hypoesthesia is considered the primary lesion. Lower ratings can usually be negated until follow-up exam confirms pathology. Hyperesthesia suggests irritation, not true pathology, and is reported as -1-Hypor when an adjusted measure is approximately 0.9 mA below the population average mean.

Interneural Dysinhibition and Pain Tolerance Threshold (PTT): In chronic hypoesthesia the attenuating spinal cord interneural fibers adapt and pass more nerve impulses, which causes a "false" hyperesthesia contralateral to the primary lesion, whose Mild to Moderate dysfunction is actually more severe. Baseline PTT is useful when sympathetically mediated (RSD-type) syndromes are suspected. Normal subjects painlessly tolerate A-delta threshold stimuli, while A-beta fibers (sensitive to 2000 Hz) tolerate up to 10 mA, and C fibers (sensitive to 5 Hz) tolerate up to three times the 5 Hz threshold.

11/07/02 THU 11:52 FAX 5163553708

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General Considerations: Based on the principles of Weber/Fechner, and the fact that humans cannot quantify electrical stimuli within this method's narrow 0.2 mA range, this exam is objective and malingering resistant. The SE-CPT assesses the entire nerve tract so it is useful in quantifying dysfunction in CNS and peripheral nerve pathologies. Published studies report over 95% sensitivity, making SE-CPT more useful than EMG/NCV, which require quite advanced nerve degeneration before detecting morbidity.

FINDINGS SUMMARY:

THE ABOVE FINDINGS SUPPORT THE CLINICAL DIAGNOSIS OF CERVICAL RADICULOPATHY SECONDARY TO TRAUMA AND SHOULD BE CORRELATED CLINICALLY WITH OTHER DIAGNOSTIC TESTING

250 HZ EXAMINATION FINDINGS OF A-DELTA FIBER HYPOESTHETIC DYSFUNCTION:

LEFT (C6) ULNAR NERVE +1 MILD

HYPERESTHESIA OF THE TYPE A DELTA FIBERS

NO HYPERESTHETIC FINDINGS NOTED.

CLINICAL CORRELATION

- If motor nerve root involvement is suspected, radiographic studies at the limits of motion in lateral bending should be taken. If motor unit dysfunction is noted, the diagnosis may include mixed sensory/motor radiculopathy.
- CT scan or MRI of the cervical spine is indicated to rule out herniated disc and/or IVF encroachment

Sincerely, —

Huseyin C. [Signature]

UNADJUSTED EXAM DATA: (add a decimal between the numbers to convert to mA) $23 = 2.3\text{mA}$
 C2R / C2L -- 30 / 34; C3R / C3L -- 28 / 30; C4R / C4L -- 30 / 30; C5R / C5L -- 28 / 28; C6R / C6L -- 32 / 28; C7R / C7L -- 34 / 36;
 C8R / C8L -- 38 / 40; T1R / T1L -- 24 / 26; T2R / T2L -- 28 / 24

VERSION 4-01

CPT MEDICAL SERVICES, PC

PO BOX 40
 Atlantic Beach, NY 11509
 (516) 371-2574

Electrodiagnostic Examination Report

Patient Information

Name: EMMANOUIL MANOLAKIS
 Date of Accident: 7/22/02
 Date of exam: 8/13/2002
 Referring Doctor: Tara O'Brien, DC
 Date of Report: 10/2/02

Study: Cervical Distribution: V-sNCT, Voltage-actuated Sensory Nerve Conduction Threshold

EXAMINATION:

ELECTRODIAGNOSTIC SENSORY NERVE THRESHOLD AMPLITUDE W/O VELOCITY (PERCEPTION THRESHOLD CERVICAL SPINAL NERVE ROOTS)

TECHNOLOGY & ANALYTIC PROTOCOL:

It has been well established that sensory nerves are more vulnerable to injury than motor nerves and the CPT test detects subtle changes to sensory function which are altered weeks, months and in some cases even years before the development of motor nerve degeneration, which EMG requires to detect pathology. In the detection of these early morbid changes, the CPT uses specific frequencies to assess a broad spectrum of sensory function in the pre and postganglionic fibers. Conventional EMG is limited mainly to the more traumatically resistant large postganglionic motor fibers. One of the many advantages of the CPT test is that it allows early targeted intervention before morbidity can jeopardize outcome. Federal Medicare guidelines list Current Perception Threshold (CPT) as "reasonable and necessary" in a wide variety of sensory conditions ranging from diabetic polyneuropathies and peripheral entrapment neuropathies to neck and back pain (radiculopathies).

SE-CPT ANALYTIC PROTOCOL:

The analytic protocol used here is the most conservative classification system. It is based upon measurements in the broad functional spectrum offered by the 250HZ. Frequency test. Measurements are rated above (hypoesthesia) and below (hyperesthesia) the mean population range of current perception threshold, after adjusting the overall patterns to correct for individual idiosyncrasies (reducing false positive tests.)

HYPOESTHESIA: Hypoesthesia is the most serious dysfunction. A rating of +1 (mild) is applied to a level measuring +0.8 mA over the mean, +2 (moderate) = +1.1 mA over mean, +3 (marked) = +1.4 mA over mean, +4 (severe) = +1.7 mA over mean, +5 (very severe) = +2.0 mA or more over mean. Contralateral deviations of more than 20% are considered to be indicative of greater severity than the basic rating analysis protocol indicate.

HYPERESTHESIA: The rating of hyperesthesia is applied to any level that is measured at less than 0.8mA of the adjusted mean pattern. No grading system is applied.

ASYMMETRY/DEVIATION: Asymmetry discovered within a given nerve root is measured and reported on when the deviation from right to left is significant (>20%) and is clinically relevant, i.e., it approximates another nerve roots lesion (usually strong hypoesthesia) either directly superior or directly inferior to the nerve root noted as having such a deviation. The relevance is that the hypoesthesia of the neighboring nerve root may be influencing via shared fibers the nerve root with the measurable asymmetry and may help explain why a patient complains of symptomatology in a nerve roots distribution that has grossly normal raw data readings. This information, when reported as present, should be considered clinically.

Type A-delta fiber Deviation Index: After measures are adjusted to the population average mean (best-match), sensory deafferentation (hypoesthesia) is rated as +1-Mild when a measure is > 0. mA above the mean. Ratings of +2-Moderate, +3-Marked, +4-Severe and +5-Very Severe are progressively > 0. mA above +1-Mild. Normal to Moderate findings are considered more significant in the presence of a contralateral deviation > %. The most severe hypoesthesia is considered the primary lesion. Lower ratings can usually be negated until follow-up exam confirms pathology. Hyperesthesia suggests irritation, not true pathology, and is reported as -1-Hyper when an adjusted measure is approximately 0.9 mA below the population average mean.

Interneural Dysinhibition and Pain Tolerance Threshold (PTT): In chronic hypoesthesia the attenuating spinal cord interneural fibers adept and pass more nerve impulses, which causes a "false" hyperesthesia contralateral to the primary lesion, whose Mild to Moderate dysfunction is actually more severe. Baseline PTT is useful when sympathetically mediated (RSD-type) syndromes are

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suspected. Normal subjects painlessly tolerate A-delta threshold stimuli, while A-beta fibers (sensitive to 2000 Hz) tolerate up to 10 mA, and C fibers (sensitive to 5 Hz) tolerate up to three times the 5 Hz threshold.

- General Considerations: Based on the principles of Weber/Fechner, and the fact that humans cannot quantify electrical stimuli within this method's narrow 0.2 mA range, this exam is objective and malingering resistant. The SE-CPT assesses the entire nerve tract so it is useful in quantifying dysfunction in CNS and peripheral nerve pathologies. Published studies report over 95% sensitivity, making SE-CPT more useful than EMG/NCV, which require quite advanced nerve degeneration before detecting morbidity.

FINDINGS SUMMARY:

THE ABOVE FINDINGS SUPPORT THE CLINICAL DIAGNOSIS OF CERVICAL RADICULOPATHY SECONDARY TO TRAUMA AND SHOULD BE CORRELATED CLINICALLY WITH OTHER DIAGNOSTIC TESTING

250 HZ EXAMINATION FINDINGS OF A-DELTA FIBER HYPOESTHETIC DYSFUNCTION:

RIGHT (C4) SUPRASCAPULAR NERVE +2 MODERATE
RIGHT (C5) AXILLARY NERVE +2 MODERATE
RIGHT (C6) RADIAL NERVE LATERAL BRANCH +1 MILD
RIGHT (C7) RADIAL NERVE MEDIAL BRANCH +1 MILD

HYPERESTHESIA OF THE TYPE A DELTA FIBERS

NO HYPERESTHETIC FINDINGS NOTED.

CLINICAL CORRELATION

- If motor nerve root involvement is suspected, radiographic studies at the limits of motion in lateral bending should be taken. If motor unit dysfunction is noted, the diagnosis may include mixed sensory/motor radiculopathy.
- CT scan or MRI of the cervical spine is indicated to rule out herniated disc and/or IVF encroachment.

Sincerely,



Husayin E. Tuncel, M.D.

UNADJUSTED EXAM DATA: (add a decimal between the numbers to convert to mA: 23 = 2.3mA)

C2R / C2L -- 22 / 24; C3R / C3L -- 26 / 20; C4R / C4L -- 30 / 26; C5R / C5L -- 30 / 25; C6R / C6L -- 30 / 25; C7R / C7L -- 30 / 32;
C8R / C8L -- 32 / 25; T1R / T1L -- 20 / 20; T2R / T2L -- 17 / 22

VERSION 4-01

HOSS MEDICAL SERVICES, PC

PO BOX 8
ATLANTIC BEACH, NY 11509
(516) 371-2574

D 2

Electrodiagnostic Examination Report**Patient Information**

Name: Donicia English

Number: 011507del

Date Report: 9/28/01

Date of Accident: 7/15/01

Referring Doctor: Dr. Aziz

Date of exam: 9/28/01

Study: Lumbar Distribution Sensory Nerve Conduction Threshold (sNCT) Amplitude**EXAMINATION:**

ELECTRODIAGNOSTIC SENSORY NERVE THRESHOLD AMPLITUDE W/O VELOCITY (PERCEPTION THRESHOLD LUMBAR SPINAL NERVE ROOTS)

TECHNOLOGY & ANALYTIC PROTOCOL:

It has been well established that sensory nerves are more vulnerable to injury than motor nerves and the CPT test detects subtle changes to sensory function which are altered weeks, months and in some cases even years before the development of motor nerve degeneration, which EMG requires to detect pathology. In the detection of these early morbid changes, the CPT uses specific frequencies to assess a broad spectrum of sensory function in the pre and postganglionic fibers. Conventional EMG is limited mainly to the more traumatically resistant large postganglionic motor fibers. One of the many advantages of the CPT test is that it allows early targeted intervention before morbidity can jeopardize outcome. Federal Medicare guidelines list Current Perception Threshold (CPT) as "reasonable and necessary" in a wide variety of sensory conditions ranging from diabetic polyneuropathies and peripheral entrapment neuropathies to neck and back pain (radiculopathies).

SE-CPT ANALYTIC PROTOCOL:

The analytic protocol used here is the most conservative classification system. It is based upon measurements in the broad functional spectrum offered by the 250HZ Frequency test. Measurements are rated above (hypoesthesia) and below (hyperesthesia) the mean population range of current perception threshold, after adjusting the overall patients to correct for individual idiosyncrasies (reducing false positive tests.)

HYPOESTHESIA: Hypoesthesia is the most serious dysfunction. A rating of +1 (mild) is applied to a level measuring +0.8 mA over the mean, +2 (moderate) = +1.1 mA over mean, +3 (marked) = +1.4 mA over mean, +4 (severe) = +1.7 mA over mean, +5 (very severe) = 2.0 mA or more over mean. Contralateral deviations of more than 20% are considered to be indicative of greater severity than the basic rating analysis protocol indicate.

HYPERESTHESIA: The rating of hyperesthesia is applied to any level that is measured at less than 0.8mA of the adjusted mean pattern. No grading system is applied.

ASYMMETRY/DEVIATION: Asymmetry discovered within a given nerve root is measured and reported on when the deviation from right to left is significant (>20%) and is clinically relevant, i.e., it approximates another nerve roots lesion (usually strong hypoesthesia) either directly superior or directly inferior to the nerve root noted as having such a deviation. The relevance is that the hypoesthesia of the neighboring nerve root may be influencing via shared fibers the nerve root with the measurable asymmetry and may help explain why a patient complains of symptomatology in a nerve roots distribution that has grossly normal raw data readings. This information, when reported as present, should be considered clinically.

Method/Device: Sensory nerve conduction threshold (sNCT) amplitude measurements by single-electrode current perception threshold (SE-CPT) device (Hedgecock Method and Deviation Index)

Lumbar Type A-delta fiber Deviation Index: After measures are adjusted to the population average mean (best-match), sensory deafferentation (hypoesthesia) is rated as +1-Mild when a measure is > 0.9 mA above the mean. Ratings of +2-Moderate, +3-Marked, +4-Severe and +5-Very Severe are progressively > 0.4 mA above +1-Mild. Normal to Moderate findings are considered more significant in the presence of a contralateral deviation > 30%. The most severe hypoesthesia is considered the primary lesion. Lower ratings can usually be negated until follow-up exam confirms pathology. Hyperesthesia suggests irritation, not true pathology, and is reported as -1-Hyper when an adjusted measure is approximately 0.9 mA below the population average mean.

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Internuclear Dysinhibition and Pain Tolerance Threshold (PTT): In chronic hypoesthesia the attenuating spinal cord internuclear fibers adapt and pass more nerve impulses, which causes a "false" hyperesthesia contralateral to the primary lesion, whose Mild to Moderate dysfunction is actually more severe. Baseline PTT is useful when sympathetically mediated (RSD-type) syndromes are suspected. Normal subjects painlessly tolerate A-delta threshold stimuli, while A-beta fibers (sensitive to 2000 Hz) tolerate up to 10 mA, and C fibers (sensitive to 5 Hz) tolerate up to three times the 5 Hz threshold.

General Considerations: Based on the principles of Weber/Fechner, and the fact that humans cannot quantify electrical stimuli within this method's narrow 0.2 mA range, this exam is objective and malingering resistant. The SE-CPT assesses the entire nerve tract so it is useful in quantifying dysfunction in CNS and peripheral nerve pathologies. Published studies report over 95% sensitivity, making SE-CPT more useful than EMG/NCV, which require quite advanced nerve degeneration before detecting morbidity.

FINDINGS SUMMARY:

THE ABOVE FINDINGS SUPPORT THE CLINICAL DIAGNOSIS OF LUMBAR RADICULOPATHY SECONDARY TO TRAUMA AND SHOULD BE CORRELATED CLINICALLY WITH OTHER DIAGNOSTIC TESTING

250 HZ EXAMINATION FINDINGS OF A-DELTA FIBER HYPOESTHETIC DYSFUNCTION:

BILATERAL (L1) UPPER LUMBAR NERVE +5 VERY SEVERE
RIGHT (L3) FEMORAL CUTANEOUS NERVE +1 MILD
LEFT (L2) LAT. FEMORAL CUTANEOUS NERVE +4 SEVERE
RIGHT (S2) POST. FEMORAL CUTANEOUS NERVE +2 MODERATE

HYPERESTHESIA OF THE TYPE A DELTA FIBERS

BILATERAL (S1) SURAL NERVE -1 HYPER

CLINICAL CORRELATION

- If motor nerve root involvement is suspected, radiographic studies at the limits of motion, unilateral bending should be taken. If motor unit dysfunction is noted, the diagnosis may include mixed sensory/motor radiculopathy.
- CT scan or MRI of the cervical spine is indicated to rule out herniated disc and/or IVF encroachment

Sincerely,



Huseyin C. Tuncel, M.D

23 23 23
 23 23 23
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UNADJUSTED EXAM DATA: (add a decimal between the numbers to convert to mA: 23 = 2.3mA)

HOSS MEDICAL SERVICES, P.C.

P.O. Box 9 Atlantic Beach, N.Y. 11509
 Appointment: (718) 327-5011

NEURODIAGNOSTIC STUDY

D3

Patient: Donicia English
 Date of onset or injury: July 15, 2001
 Date of examination: 08/15/01
 Date of report: 08/22/01
 Referring Doctor: Dr. Aziz

**EXAMINATION: ELECTRODIAGNOSTIC SENSORY NERVE THRESHOLD AMPLITUDE
 W/O VELOCITY (PERCEPTION THRESHOLD CERVICAL SPINAL NERVE ROOTS)**

TECHNOLOGY & ANALYTIC PROTOCOL

It has been well established that sensory nerves are more vulnerable to injury than motor nerves, and the CPT test detects subtle changes to sensory function which are altered weeks, months, and in some cases even years before the development of motor nerve degeneration, which EMG requires to detect pathology. In the detection of these early morbid changes, the CPT uses specific frequencies to assess a broad spectrum of sensory function in the pre and postganglionic fibers. Conventional EMG is limited mainly to the more traumatically resistant large postganglionic motor fibers. One of the many advantages of the CPT test is that it allows early targeted intervention before morbidity can jeopardize outcome. Federal Medicare guidelines list Current Perception Threshold (CPT) as "reasonable and necessary" in a wide variety of sensory conditions ranging from diabetic polyneuropathies and peripheral entrapment neuropathies to neck and back pain (radiculopathies).

CPT ANALYTIC PROTOCOL:

The analytic protocol used here is the most conservative classification system. It is based upon measurements in the broad functional spectrum offered by the 250 Hz. frequency test. Measurements are rated above (hypoesthesia) and below (hyperesthesia) the mean population range of current perception threshold, after adjusting the overall pattern to correct for individual idiosyncrasies (reducing false positive tests).

HYPOESTHESIA: Hypoesthesia is the most serious dysfunction. A rating of +1 (mild) is applied to a level measuring +0.8 mA over the mean, +2 (moderate) = +1.1 mA over mean, +3 (marked) = +1.4 mA over mean, +4 (severe) = +1.7 mA over mean, +5 (very severe) = 2.0 mA or more over mean. Contralateral deviations of more than 20% are considered to be indicative of greater severity than the basic rating analysis protocol indicates.

HYPERESTHESIA: The rating of hyperesthesia is applied to any level that is measured at less than 0.8 mA of the adjusted mean pattern. No grading system is applied.

ASYMMETRY/DEVIATION: Asymmetry discovered within a given nerve root is measured and reported on when the deviation from right to left is significant (>20%) and is clinically relevant. It approximates another nerve root lesion (usually strong hypoesthesia) either directly superior or directly inferior to the nerve root noted as having such a deviation. The relevance is that the hypoesthesia of the neighboring nerve root may be influencing via shared fibers the nerve root with the measurable asymmetry and may help explain why a patient complains of symptomatology in a nerve root distribution that has grossly normal raw data readings. This information, when reported as present, should be considered clinically secondary to the neighboring nerve root lesion.

DONICIA ENGLISH : EXAMINATION FINDINGS

The cervical nerves tested in this patient included suprascapular, musculocutaneous, median antibrachial cutaneous, radial, median, ulnar, and intercostobrachial and medial brachial cutaneous nerves. Findings are reported in reference to dermatomal segments, since the suspected site of the lesion is the spinal nerve root(s).

HYPOESTHESIA (250 Hz): HYPOESTHESIA WAS DETECTED AT SIX OF THE EIGHTEEN SITES TESTED AND ARE AS FOLLOWS:

C4 RIGHT/RIGHT SUPRASCAPULAR NERVE (+3.6, MARKED-SEVERE);
C5 BILATERAL/BILAT. AXILLARY NERVES (+4 RIGHT, SEVERE AND +1 LEFT, MILD);
C6 BILATERAL/BILAT. RADIAL NERVES (+2, MODERATE); AND
T2 RIGHT/RIGHT 2ND THORACIC NERVE (+3.3, MARKED-SEVERE).

HYPERESTHESIA (250Hz): No hyperesthesia findings are noted.

ASSYMETRICAL DEVIATION:

None of the 250 Hz. right to left deviations is deemed to add any diagnostic significance to the findings as already stated above.

DIAGNOSIS:

THESE FINDINGS SUPPORT AN ELECTROPHYSIOLOGIC DIAGNOSIS OF CERVICAL RADICULOPATHY. THE SITE OF THE LESION IS THE NERVE ROOT RADICALS AND/OR ASSOCIATED STRUCTURES AT C4, C5, C6 AND T2. THESE FINDINGS OBJECTIVELY DOCUMENT THE SENSORY SYMPTOMATOLOGY DESCRIBED BY THE PATIENT.

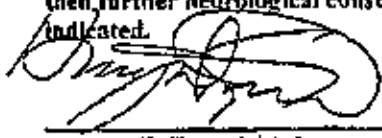
SUMMARY:

THIS EXAMINATION DEMONSTRATES ABNORMAL SENSORY RESPONSE IN THE 250 HZ. SENSITIVE TYPE A DELTA NERVE FIBERS WITH THE MOST SERIOUS INVOLVEMENT BEING FUNCTIONAL HYPOESTHESIA. THIS WAS FOUND AT THE LEVELS OF C4, C5, C6 AND T2. THE ABOVE FINDINGS SUPPORT THE CLINICAL DIAGNOSIS OF CERVICAL RADICULOPATHY SECONDARY TO TRAUMA AND SHOULD BE CORRELATED CLINICALLY WITH OTHER DIAGNOSTIC TESTING.

CLINICAL CORRELATION:

The motor nerve root involvement may be further documented with radiographic studies at the limits of motion in lateral bending. If motor unit dysfunction is noted, the diagnosis may include mixed sensory/motor radiculopathy. CT scan or MRI of the cervical spine is indicated in this case to rule out herniated disc, spinal cord lesion and/or IVF encroachment.

RECOMMENDATIONS: Once all contraindications have been excluded, spinal manipulation directed at the involved levels with a course of active non-weight bearing exercises seems the most efficacious conservative treatment. Conservative treatment should be directed at restoring proper nervous system function by freeing any biomechanical interference or spinal nerve root encroachment where possible. If the patient proves unresponsive to a more conservative approach, then further neurological consultation and intervention such as nerve block therapy may be indicated.


Huseyin E. Tuncel, M.D.

Date of report: 08/22/01

CPT MEDICAL SERVICES, P.C.

40 Atlantic Beach, N.Y. 11509

Appointments: (718) 327-5011

NEURODIAGNOSTIC STUDY

Patient: Pearlman Frederick

Date of onset or injury: June 23, 2001

Date of examination: 08/22/01

Date of report: 08/24/01

Referring Doctor: Dr. Montana

EXAMINATION:**ELECTRODIAGNOSTIC SENSORY NERVE THRESHOLD AMPLITUDE W/O VELOCITY
(PERCEPTION THRESHOLD LUMBOSACRAL SPINAL NERVE ROOTS)****TECHNOLOGY & ANALYTIC PROTOCOL**

It has been well established that sensory nerves are more vulnerable to injury than motor nerves, and the CPT test detects subtle changes to sensory function which are altered weeks, months, and in some cases even years before the development of motor nerve degeneration, which EMG requires to detect pathology. In the detection of these early morbid changes, the CPT uses specific frequencies to assess a broad spectrum of sensory function in the pre and postganglionic fibers. Conventional EMG is limited mainly to the more traumatically resistant large postganglionic motor fibers. One of the many advantages of the CPT test is that it allows early targeted intervention before morbidity can jeopardize outcome. Federal Medicare guidelines list Current Perception Threshold (CPT) as "reasonable and necessary" in a wide variety of sensory conditions ranging from diabetic polyneuropathies and peripheral entrapment neuropathies to neck and back pain (radiculopathies).

CPT ANALYTIC PROTOCOL:

The analytic protocol used here is the most conservative classification system. It is based upon measurements in the broad functional spectrum offered by the 250 Hz. frequency test. Measurements are rated above (hypoesthesia) and below (hyperesthesia) the mean population range of current perception threshold, after adjusting the overall pattern to correct for individual idiosyncrasies (reducing false positive tests).

HYPUESTHESIA: Hypoesthesia is the most serious dysfunction. A rating of +1 (mild) is applied to a level measuring +0.8 mA over the mean, +2 (moderate) = +1.1 mA over mean, +3 (marked) = +1.4 mA over mean, +4 (severe) = +1.7 mA over mean, +5 (very severe) = 2.0 mA or more over mean. Contralateral deviations of more than 20% are considered to be indicative of greater severity than the basic rating analysis protocol indicates.

HYPERESTHESIA: The rating of hyperesthesia is applied to any level that is measured at less than 0.9 mA of the adjusted mean pattern. No grading system is applied.

ASYMMETRY/DEVIATION: Asymmetry discovered within a given nerve root is measured and reported on when the deviation from right to left is significant (>20%) and is clinically relevant, i.e., it approximates another nerve root lesion (usually strong hypoesthesia) either directly superior or directly inferior to the nerve root noted as having such a deviation. The relevance is that the hypoesthesia of the neighboring nerve root may be influencing via shared fibers the nerve root with the measurable asymmetry and may help explain why a patient complains of symptomatology in a nerve root distribution that has grossly normal raw data readings. This information, when reported as present, should be considered clinically secondary to the neighboring nerve root lesion.

PEARLEEN FREDERICK: EXAMINATION FINDINGS.

The lumbar nerves tested in this polyarthritic patient included lateral femoral cutaneous, femoral, peroneal, saphenous, and sural nerves. Findings are reported in reference to dermatomal segments, since the suspected site of the lesion is the spinal nerve root(s).

HYPOESTHESIA (250 Hz): HYPOESTHESIA WAS DETECTED AT TWO OF THE FOURTEEN SITES TESTED;

S1 BILATERAL/SURAL NERVES (+1.75 RIGHT, MILD AND +2 LEFT, MODERATE).

DEVIATION RIGHT TO LEFT:

None of the 250 Hz. right to left deviations is deemed to add any diagnostic significance to the findings as already stated above.

HYPERESTHESIA:

250Hz: No hyperesthesia findings are noted.

DIAGNOSIS:

These findings support an electrophysiologic diagnosis of lumbar radiculopathy. The site of the lesion is the nerve root radicals and/or associated structures at S1. These findings objectively document the sensory symptomatology described by the patient.

SUMMARY FOR PEARLEEN FREDERICK:

This examination demonstrates abnormal sensory response in the 250 HZ. Sensitive type A delta nerve fibers with the most serious involvement being functional hypoesthesia. This was found at the level of S1.

* THE ABOVE FINDINGS SUPPORT THE CLINICAL DIAGNOSIS OF LUMBAR RADICULOPATHY SECONDARY TO TRAUMA AND SHOULD BE CORRELATED CLINICALLY WITH OTHER DIAGNOSTIC TESTING.

CLINICAL CORRELATION:

If motor nerve root involvement is suspected, radiographic studies at the limits of motion in lateral bending should be taken. If motor unit dysfunction is noted, the diagnosis may include mixed sensory/motor radiculopathy.

CT scan or MRI of the lumbosacral spine is indicated to rule out herniated disc and/or IVF encroachment.

RECOMMENDATIONS: Once all contraindications have been excluded, spinal manipulation with a course of active non-weight bearing exercises seems the most efficacious conservative treatment. Conservative treatment should be directed at correcting the vertebral unit dysfunction at these levels to restore proper nervous system function by freeing any biomechanical interference or spinal nerve root encroachment where possible. If the patient proves unresponsive to a more conservative approach, then further neurological consultation and intervention such as nerve block therapy may be indicated.


Huseyin E. Tuncel, M.D.

Date of report: 8/24/01

CPT MEDICAL SERVICES, P.C.1600 Central Avenue, 1st Floor, Rest Suite
Far Rockaway, N.Y. 11691

APPOINTMENTS: 718-317-8011

D 4

NEURODIAGNOSTIC STUDY

Patient: Angelo Santos
 Date of onset or injury: June 5, 1999
 Referring Doctor: Dr. Roumi
 Date of examination: 12/02/99
 Date of report: 12/09/99

EXAMINATION:**CERVICAL CURRENT PERCEPTION THRESHOLD (CPT) NERVE CONDUCTION STUDY****TECHNOLOGY:**

Federal Medicare guidelines list Current Perception Threshold (CPT) as "reasonable and necessary" in a wide variety of sensory conditions ranging from diabetic polyneuropathies and peripheral entrapment neuropathies to neck and back pain (radiculopathies). It has been well established that sensory nerves are more vulnerable to injury than motor nerves, and the CPT test detects subtle changes to sensory function which are altered weeks, months, and in some cases even years before the development of motor nerve degeneration, which EMG requires to detect pathology. In the detection of these early morbid changes, the CPT uses specific frequencies to assess a broad spectrum of sensory function in the pre and postganglionic fibers. Conventional EMG is limited mainly to the more traumatically resistant large postganglionic motor fibers. One of the many advantages of the CPT test is that it allows early targeted intervention before morbidity can jeopardize outcome.

(Interest in CPT began at Johns Hopkins in the early 1980s and continues at major institutions such as Harvard and UCLA. It has been supported by a body of published research and clinical data to have a sensitivity in the 80% to 90% range with a specificity of 100% (P. L. Pelesar, MD; *Journal of Clinical Neurophysiology*, March 1995). The latest innovation has been the introduction of digitally produced current waveforms that allow precise system threshold responses within 0.1 mA; this accuracy was not possible with the previous analog technology. With this greater accuracy, the CPT tests are now, more than ever, the method of choice for early detection of sensory neuropathies, radiculopathies, Reflex Sympathetic Dystrophy (RSD) and for screening patients before more painful invasive nerve tests are performed.)

CPT ANALYTIC PROTOCOL:

The analytic protocol used here is the most conservative classification system. It is based upon measurements in the broad functional spectrum offered by the 250 Hz. frequency test. Measurements are rated above (hypoesthesia) and below (hyperesthesia) the mean population range of current perception threshold, after adjusting the overall pattern to correct for individual idiosyncrasies (reducing false positive tests).

HYPOESTHESIA: Hypoesthesia is the most serious dysfunction. A rating of +1 (mild) is applied to a level measuring +0.8 mA over the mean, +2 (moderate) = +1.1 mA over mean, +3 (marked) = +1.4 mA over mean, +4 (severe) = +1.7 mA over mean, +5 (very severe) = 2.0 mA or more over mean. Contralateral deviations of more than 20% are considered to be indicative of greater severity than the basic rating analysis protocol indicates.

HYPERESTHESIA: The rating of hyperesthesia is applied to any level that is measured at less than 0.8 mA of the adjusted mean pattern. No grading system is applied.

QUANTIFICATION OF RSD BY PAIN PERCEPTION THRESHOLD (PPT): Where suspected, PPT testing can be performed to detect and quantify the perversion of sensory perception associated with RSD. Pain is normally not experienced with the 2000 Hz. frequency even at a maximum output of 10.0 mA, and the 5 Hz. frequency is not normally painful to less than three times the recognition level. Patients often experience unexpected pain at 250 Hz, as well. Variations in these levels of tolerance at all three frequencies are helpful in the diagnosis and quantification of RSD.

RECEIVED

JUN 02 2000

JEAN CHAMBLIN
LAKEVILLE ORO

ANGELO SANTOS: EXAMINATION FINDINGS.

The cervical nerves tested in this polyalgic patient included suprascapular, musculocutaneous, median antebrahial cutaneous, radial, median, ulnar, and intercostobrachial and medial brachial cutaneous nerves. Findings are reported in reference to dermatomal segments, since the suspected site of the lesion is the spinal nerve root(s).

THE FOLLOWING NERVE ROOT SITES WERE FOUND TO HAVE ABNORMAL FINDINGS UPON NERVE FUNCTION TESTING:

Hypoesthesia:	C6 BILATERAL
Hyperesthesia:	None
Abnormal right to left comparison:	None

HYPOESTHESIA:

250 Hz: HYPOESTHESIA WAS DETECTED AT TWO OF THE EIGHTEEN SITES TESTED AND ARE AS FOLLOWS; C6 BILATERAL (+1, MILD).

DEVIATION RIGHT TO LEFT:

None of the 250 Hz. right to left deviations is deemed to add any diagnostic significance to the findings as already stated above.

HYPERESTHESIA:

250Hz: No hyperesthesia findings are noted.

DIAGNOSIS:

These findings support an electrophysiologic diagnosis of cervical radiculopathy. The site of the lesion is the nerve root radicals and/or associated structures at C6. These findings authenticate the concomitant sensory paresthesia described by the patient as actual.

SUMMARY FOR ANGELO SANTOS:

THIS EXAMINATION DEMONSTRATES ABNORMAL SENSORY RESPONSE IN THE 250 HZ. SENSITIVE TYPE A DELTA NERVE FIBERS WITH THE MOST SERIOUS INVOLVEMENT BEING FUNCTIONAL HYPOESTHESIA. THIS WAS FOUND AT THE LEVEL OF C6.

THE ABOVE FINDINGS SUPPORT THE CLINICAL DIAGNOSIS OF CERVICAL RADICULOPATHY SECONDARY TO TRAUMA AND SHOULD BE CORRELATED CLINICALLY WITH OTHER DIAGNOSTIC TESTING.

CONSERVATIVE TREATMENT SHOULD BE DIRECTED AT CORRECTING THE VERTEBRAL DYSFUNCTION AT THESE LEVELS TO RESTORE PROPER NERVOUS SYSTEM FUNCTION BY FREEING ANY BIOMECHANICAL INTERFERENCE OR SPINAL NERVE ROOT ENCROACHMENT WHERE POSSIBLE.

CLINICAL CORRELATION:

The motor nerve root involvement may be further documented with radiographic studies at the limits of motion in lateral bending. If motor unit dysfunction is noted, the diagnosis may include mixed sensory/motor radiculopathy.

CT scan or MRI of the cervical spine may be indicated to rule out herniated disc and/or IVF encroachment.

Nerve dysfunction can be secondary to direct trauma and/or inflammation consequential to the reaction of chemical metabolites (PLA-2) leaking from corrupt traumatized tissues adjacent to the nerve. Clinical correlation is needed to differentiate the pain generator. Once all contraindications have been excluded, spinal manipulation with a course of active non-weight bearing exercises seems the most efficacious conservative treatment.

If the patient proves unresponsive to a more conservative approach, then further neurological consultation and intervention such as nerve block therapy may be indicated.



Huséyin E. Tuncel, M.D.

CPT MEDICAL SERVICES, P.C.P.O. Box 40
Atlantic Beach, N.Y. 11509

APPOINTMENTS: 718-337-5011

D.S.

NEURODIAGNOSTIC STUDY

Patient: Javier Ramos
 Date of onset or injury: ~~May 2, 2000~~
 Referring Doctor: Dr. Colla
 Date of examination: July 7, 2000
 Date of report: July 10, 2000

EXAMINATION:**CERVICAL CURRENT PERCEPTION THRESHOLD (CPT) NERVE CONDUCTION STUDY****TECHNOLOGY:**

Federal Medical Guidelines list Current Perception Threshold (CPT) as "reasonable and necessary" in a wide variety of sensory conditions ranging from diabetic polyneuropathies and peripheral entrapment neuropathies to neck and back pain (radiculopathies). It has been well established that sensory nerves are more vulnerable to injury than motor nerves, and the CPT test detects subtle changes to sensory function which are altered weeks, months, and in some cases even years before the development of motor nerve degeneration, which EMG requires to detect pathology. In the detection of these early morbid changes, the CPT uses specific frequencies to assess a broad spectrum of sensory function in the pre and postganglionic fibers. Conventional EMG is limited mainly to the more traumatically resistant large postganglionic motor fibers. One of the many advantages of the CPT test is that it allows early targeted intervention before morbidity can jeopardize outcome.

CPT has a sensitivity in the 80% to 90% range with a specificity of 100% that allow precise system threshold responses within 0.1 mA. With this greater accuracy, the CPT tests are now, more than ever, the method of choice for early detection of sensory neuropathies, radiculopathies, Reflex Sympathetic Dystrophy (RSD) and for screening patients before more painful invasive tests are performed.

RECEIVED

CPT ANALYTIC PROTOCOL:

The analytic protocol used here is the most conservative classification system. It is based upon measurements in the broad functional spectrum offered by the 250 Hz frequency test. Measurements are rated above (hypoesthesia) and below (hyperesthesia) the mean population range of current perception threshold, after adjusting the overall pattern to correct for individual idiosyncrasies (reducing false positive tests).

MAIL & FILE

HYPOESTHESIA: Hypoesthesia is the most serious dysfunction. A rating of +1 (mild) is applied to a level measuring +0.8 mA over the mean, +2 (moderate) = +1.1 mA over mean, +3 (marked) = +1.4 mA over mean, +4 (severe) = +1.7 mA over mean, +5 (very severe) = 2.0 mA or more over mean. Contralateral deviations of more than 20% are considered to be indicative of greater severity than the basic rating analysis protocol indicates.

HYPERESTHESIA: The rating of hyperesthesia is applied to any level that is measured at less than 0.8 mA of the adjusted mean pattern. No grading system is applied.

JAVIER RAMOS : EXAMINATION FINDINGS

The cervical nerves tested in this polyalgie patient included suprascapular, musculocutaneous, median antebrachial cutaneous, radial, median, ulnar, and intercostobrachial and medial brachial cutaneous nerves. Findings are reported in reference to dermatomal segments, since the suspected site of the lesion is the spinal nerve root(s).

THE FOLLOWING NERVE ROOT SITES WERE FOUND TO HAVE NORMAL FINDINGS UPON NERVE FUNCTION TESTING:

Hypoesthesia:

C5 LEFT, C6 BILATERAL, C8 BILATERAL,
T1 RIGHT and T2 BILATERAL

Hyperesthesia:

None

Abnormal right to left comparison:

None

HYPOESTHESIA:250 Hz: HYPOESTHESIA WAS DETECTED AT EIGHT OF THE EIGHTEEN SITES TESTED AND ARE AS FOLLOWS:

1. C5 LEFT/LEFT AXILLARY NERVE (+1.3, MILD-MODERATE);
2. C6 BILATERAL/BILATERAL RADIAL NERVES (+1.6 RIGHT, MILD-MODERATE and +3.6 LEFT, MARKED-SEVERE);
3. C8 BILATERAL/BILATERAL ULNAR NERVES (SUPERFICIAL BR.) (>+5, VERY SEVERE);
4. T1 RIGHT/RIGHT 1ST THORACIC NERVE (+2, MODERATE); and
5. T2 BILATERAL/BILATERAL 2ND THORACIC NERVES (>+5, VERY SEVERE).

DEVIATION RIGHT TO LEFT:

None of the 250 Hz. right to left deviations is deemed to add any diagnostic significance to the findings as already stated above.

HYPERESTHESIA:250Hz: No hyperesthesia findings are noted.DIAGNOSIS:

These findings support an electrophysiologic diagnosis of cervical radiculopathy. The site of the lesion is the nerve root radicals and/or associated structures at C5, C6, C8, T1 and T2, with the most prominent lesion identified at C8. The neighboring and/or shared nerves may be an adversely affected secondary lesion. These findings authenticate the concomitant sensory paresthesias described by the patient as actual.

SUMMARY FOR JAVIER RAMOS:

This examination demonstrates abnormal sensory response in the 250 Hz. sensitive type A delta nerve fibers with the most serious involvement being functional hypoesthesia. This was found at the levels of C5, C6, C8, T1 and T2.

- > THE ABOVE FINDINGS SUPPORT THE CLINICAL DIAGNOSIS OF CERVICAL RADICULOPATHY SECONDARY TO TRAUMA AND SHOULD BE CORRELATED CLINICALLY WITH STANDARD NCV AND/OR EMG DIAGNOSTIC TESTING.
- > CONSERVATIVE TREATMENT SHOULD BE DIRECTED AT CORRECTING THE VERTEBRAL DYSFUNCTION AT THESE LEVELS TO RESTORE PROPER NERVOUS SYSTEM FUNCTION BY FREEING ANY BIOMECHANICAL INTERFERENCE OR SPINAL NERVE ROOT ENCROACHMENT WHERE POSSIBLE.

CLINICAL CORRELATION:


The motor nerve root involvement may be further documented with radiographic studies at the limits of motion in lateral bending. If motor unit dysfunction is noted, the diagnosis may include mixed sensory/motor radiculopathy.

CT scan or MRI of the cervical spine may be indicated to rule out herniated disc and/or IVF encroachment.

NCV and EMG of the upper extremities may be indicated at a later time to determine chronic/permanent nerve damage of the above-noted nerves.

Nerve dysfunction can be secondary to direct trauma and/or inflammation consequential to the reaction of chemical metabolites (PLA-2) leaking from corrupt traumatized tissues adjacent to the nerve. Clinical correlation is needed to differentiate the pain generator. Once all contraindications have been excluded, spinal manipulation with a course of active non-weight bearing exercises seems the most efficacious conservative treatment.

If the patient proves unresponsive to a more conservative approach, then further neurological consultation and intervention such as nerve block therapy may be indicated.


 Huseyin E. Tuncel, M.D.

CPT MEDICAL SERVICES, P.C.

P.O. Box 40
Atlantic Beach, N.Y. 11509

Appointments: (718) 327-5011

NEURODIAGNOSTIC STUDY

Patient: Samuel McCullough
Date of onset or injury: April 20, 2000
Referring Doctor: Dr. Christopher J. Green
Date of examination: July 13, 2000
Date of report: July 17, 2000

EXAMINATION:

LUMBAR CURRENT PERCEPTION THRESHOLD (CPT) NERVE CONDUCTION STUDY

TECHNOLOGY & ANALYTIC PROTOCOL

Federal Medicare guidelines list Current Perception Threshold (CPT) as "reasonable and necessary" in a wide variety of sensory conditions ranging from diabetic polyneuropathies and peripheral entrapment neuropathies to neck and back pain (radiculopathies). It has been well established that sensory nerves are more vulnerable to injury than motor nerves, and the CPT test detects subtle changes to sensory function which are altered weeks, months, and in some cases even years before the development of motor nerve degeneration, which EMG requires to detect pathology. In the detection of these early morbid changes, the CPT uses specific frequencies to assess a broad spectrum of sensory function in the pre and postganglionic fibers. Conventional EMG is limited mainly to the more traumatically resistant large postganglionic motor fibers. One of the many advantages of the CPT test is that it allows early targeted intervention before morbidity can jeopardize outcome.

CPT has a sensitivity in the 80% to 90% range with a specificity of 100% that allow precise system threshold responses within 0.1 mA. With this greater accuracy, the CPT tests are now, more than ever, the method of choice for early detection of sensory neuropathies, radiculopathies, Reflex Sympathetic Dystrophy (RSD) and for screening patients before more painful, invasive tests are performed.

CPT ANALYTIC PROTOCOL:

The analytic protocol used here is the most conservative classification system. It is based upon measurements in the broad functional spectrum offered by the 150 Hz. frequency test. Measurements are rated above (hypoesthesia) and below (hyperesthesia) the mean population range of current perception threshold, after adjusting the overall pattern to correct for individual idiosyncrasias (reducing false positive tests).

HYPOESTHESIA: Hypoesthesia is the most serious dysfunction. A rating of +1 (mild) is applied to a level measuring +0.8 mA over the mean, +2 (moderate) = +1.1 mA over mean, +3 (marked) = +1.4 mA over mean, +4 (severe) = +1.7 mA over mean, +5 (very severe) = 2.0 mA or more over mean. Contralateral deviations of more than 20% are considered to be indicative of greater severity than the basic rating analysis protocol indicates.

HYPERESTHESIA: The rating of hyperesthesia is applied to any level that is measured at less than 0.8 mA of the adjusted mean pattern. No grading system is applied.

SAMUEL MCCULLOUGH: EXAMINATION FINDINGS

The lumbar nerves tested in this polyalgic patient included lateral femoral cutaneous, femoral, peroneal, saphenous, and sural nerves. Findings are reported in reference to dermatomal segments, since the suspected site of the lesion is the spinal nerve root(s).

RECEIVED

AUG 22 2000

LABORATORY
WAL & FILE

THE FOLLOWING NERVE ROOT SITES WERE FOUND TO HAVE ABNORMAL FINDINGS UPON NERVE FUNCTION TESTING:

Hypoesthesia:	L3 LEFT and L4 BILATERAL
Hyperesthesia:	None
Abnormal right to left comparison:	None

HYPOESTHESIA:

250 Hz: HYPOESTHESIA WAS DETECTED AT THREE OF THE FOURTEEN SITES TESTED AND ARE AS FOLLOWS;

1. L3 LEFT/LEFT FEMORAL CUTANEOUS NERVE (+1, MILD); and
2. L4 BILATERAL/BILATERAL SAPHENOUS NERVES (+1.75 RIGHT, MILD-MODERATE and +2.75 LEFT, MODERATE-MARKED).

DEVIATION RIGHT TO LEFT:

None of the 250 Hz. right to left deviations is deemed to add any diagnostic significance to the findings as already stated above.

HYPERESTHESIA:

250Hz: No hyperesthesia findings are noted.

DIAGNOSIS:

These findings support an electrophysiologic diagnosis of lumbar radiculopathy. The site of the lesion is the nerve root radicals and/or associated structures at L3 and L4, with the most prominent lesion identified at L4. The neighboring and/or shared nerves may be adversely affected secondary lesions. These findings authenticate the concomitant sensory paresthesias described by the patient as actual.

SUMMARY FOR SAMUEL MCCULLOUGH:

This examination demonstrates abnormal sensory response in the 250 Hz. sensitive type A delta fibers with the most serious involvement being functional hypoesthesia. This was found at the levels of L3 and L4.

- > THE ABOVE FINDINGS SUPPORT THE CLINICAL DIAGNOSIS OF LUMBAR RADICULOPATHY SECONDARY TO TRAUMA AND SHOULD BE CORRELATED CLINICALLY WITH OTHER DIAGNOSTIC TESTING.
- > CONSERVATIVE TREATMENT SHOULD BE DIRECTED AT CORRECTING THE VERTEBRAL DYSFUNCTION AT THESE LEVELS TO RESTORE PROPER NERVOUS SYSTEM FUNCTION BY FREEING ANY BIOMECHANICAL INTERFERENCE OR SPINAL NERVE ROOT ENCROACHMENT WHERE POSSIBLE.

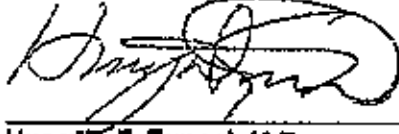
CLINICAL CORRELATION:

The motor nerve root involvement may be further documented with radiographic studies at the limits of motion in lateral bending. If motor unit dysfunction is noted, the diagnosis may include mixed sensory/motor radiculopathy.

CT scan or MRI of the lumbosacral spine may be indicated to rule out herniated disc and/or IVF encroachment. NCV and EMG of the lower extremities may be indicated at a later time to determine chronic/permanent nerve damage of the above-noted nerves.

Nerve dysfunction can be secondary to direct trauma and/or inflammation consequential to the reaction of chemical metabolites (PLA-2) leaking from corrupt traumatized tissues adjacent to the nerve. Clinical correlation is needed to differentiate the pain generator. Once all contraindications have been excluded, spinal manipulation with a course of active non-weight bearing exercises seems the most efficacious conservative treatment.

If the patient proves unresponsive to a more conservative approach, then further neurological consultation and intervention such as nerve block therapy may be indicated.

A handwritten signature in black ink, appearing to read 'Huseyin E. Tuncel', written over a horizontal line.

Huseyin E. Tuncel, M.D.

CPT MEDICAL SERVICES, P.C.

P.O. Box 40
Atlantic Beach, N.Y. 11509

APPOINTMENTS: 718-327-6011

NEURODIAGNOSTIC STUDY

Patient: Sam McCullough
Date of onset or injury: April 19, 2000
Referring Doctor: Dr. Christopher J. Green
Date of examination: May 23, 2000
Date of report: May 25, 2000

EXAMINATION:

CERVICAL CURRENT PERCEPTION THRESHOLD (CPT) NERVE CONDUCTION STUDY

TECHNOLOGY:

Federal Medicare guidelines list Current Perception Threshold (CPT) as "reasonable and necessary" in a wide variety of sensory conditions ranging from diabetic polyneuropathies and peripheral entrapment neuropathies to neck and back pain (radiculopathies). It has been well established that sensory nerves are more vulnerable to injury than motor nerves, and the CPT test detects subtle changes to sensory function which are altered weeks, months, and in some cases even years before the development of motor nerve degeneration, which EMG requires to detect pathology. In the detection of these early morbid changes, the CPT uses specific frequencies to assess a broad spectrum of sensory function in the pre and postganglionic fibers. Conventional EMG is limited mainly to the more traumatically resistant large postganglionic motor fibers. One of the many advantages of the CPT test is that it allows early targeted intervention before morbidity can jeopardize outcome.

CPT has a sensitivity in the 80% to 90% range with a specificity of 100% that allow precise system threshold responses within 0.1 mA. With this greater accuracy, the CPT tests are now, more than ever, the method of choice for early detection of sensory neuropathies, radiculopathies, Reflex Sympathetic Dystrophy (RSD) and for screening patients before more painful invasive tests are performed.

CPT ANALYTIC PROTOCOL:

The analytic protocol used here is the most conservative classification system. It is based upon measurements in the broad functional spectrum offered by the 250 Hz. frequency test. Measurements are rated above (hypoesthesia) and below (hyperesthesia) the mean population range of current perception threshold, after adjusting the overall pattern to correct for individual idiosyncrasies (reducing false positive tests).

HYPOESTHESIA: Hypoesthesia is the most serious dysfunction. A rating of +1 (mild) is applied to a level measuring +0.8 mA over the mean, +2 (moderate) = +1.1 mA over mean, +3 (marked) = +1.4 mA over mean, +4 (severe) = +1.7 mA over mean, +5 (very severe) = 2.0 mA or more over mean. Contralateral deviations of more than 20% are considered to be indicative of greater severity than the basic rating analysis protocol indicates.

HYPERESTHESIA: The rating of hyperesthesia is applied to any level that is measured at less than 0.8 mA of the adjusted mean pattern. No grading system is applied.

SAM MCCULLOUGH: EXAMINATION FINDINGS:

The cervical nerves tested in this polyalgic patient included suprascapular, musculocutaneous, median antebrachial cutaneous, radial, median, ulnar, and intercostobrachial and medial brachial cutaneous nerves. Findings are reported in reference to dermatomal segments, since the suspected site of the lesion is the spinal nerve root(s).

RECEIVED

MAY 14 2000

THOMAS WIGGINS
LAUREL 11509

THE FOLLOWING NERVE ROOT SITES WERE FOUND TO HAVE ABNORMAL FINDINGS UPON NERVE FUNCTION TESTING:

Hypoesthesia:

C2 RIGHT, C6 RIGHT and T1 LEFT

Hyperesthesia:

None

Abnormal right to left comparison:

None

HYPOESTHESIA:

250 Hz: HYPOESTHESIA WAS DETECTED AT THREE OF THE EIGHTEEN SITES TESTED AND ARE AS FOLLOWS:

1. C2 RIGHT/RIGHT GREATER OCCIPITAL NERVE (+1.6, MILD-MODERATE);
2. C6 RIGHT/RIGHT RADIAL NERVE (+1.3, MILD-MODERATE); and
3. T1 LEFT/LEFT 1ST THORACIC NERVE (+1, MILD).

DEVIATION RIGHT TO LEFT:

None of the 250 Hz. right to left deviations is deemed to add any diagnostic significance to the findings as already stated above.

HYPERESTHESIA:

250Hz: No hyperesthesia findings are noted.

DIAGNOSIS:

These findings support an electrophysiologic diagnosis of cervical radiculopathy. The site of the lesion is the nerve root radicals and/or associated structures at C2, C6 and T1. These findings authenticate the concomitant sensory paresthesias described by the patient as actual.

SUMMARY FOR SAM MCCULLOUGH:

This examination demonstrates abnormal sensory response in the 250 Hz. sensitive type A delta nerve fibers with the most serious involvement being functional hypoesthesia. This was found at the levels of C2, C6 and T1.

- > THE ABOVE FINDINGS SUPPORT THE CLINICAL DIAGNOSIS OF CERVICAL RADICULOPATHY SECONDARY TO TRAUMA AND SHOULD BE CORRELATED CLINICALLY WITH STANDARD NCV AND/OR EMG DIAGNOSTIC TESTING.
- > CONSERVATIVE TREATMENT SHOULD BE DIRECTED AT CORRECTING THE VERTEBRAL DYSFUNCTION AT THESE LEVELS TO RESTORE PROPER NERVOUS SYSTEM FUNCTION BY FREEING ANY BIOMECHANICAL INTERFERENCE OR SPINAL NERVE ROOT ENCROACHMENT WHERE POSSIBLE.

CLINICAL CORRELATION:


The motor nerve root involvement may be further documented with radiographic studies at the limits of motion in lateral bending. If motor unit dysfunction is noted, the diagnosis may include mixed sensory/motor radiculopathy.

CT scan or MRI of the cervical spine may be indicated to rule out herniated disc and/or IVF encroachment.

NCV and EMG of the upper extremities may be indicated at a later time to determine chronic/permanent nerve damage of the above-noted nerves.

Nerve dysfunction can be secondary to direct trauma and/or inflammation consequential to the reaction of chemical metabolites (PLA-2) leaking from corrupt traumatized tissues adjacent to the nerve. Clinical correlation is needed to differentiate the pain generator. Once all contraindications have been excluded, spinal manipulation with a course of active non-weight bearing exercises seems the most efficacious conservative treatment.

If the patient proves unresponsive to a more conservative approach, then further neurological consultation and intervention such as nerve block therapy may be indicated.


Huseyin E. Tuncel, M.D.

RECEIVED
MAY 14 2005
THOMAS WIGGINS
LAKEVILLE, CT

Augustyniak

RUCO EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	MCV	ENG	MRI
89	32-A009-039	Bill	3/24/2000	X			
95	32-V073-224	Bill	4/8/2000	X	X	X	
98	32-V073-224	Bill	4/8/2000		X	X	X
96	32-A010-837	Bill	4/8/2000	X	X	X	X
97	32-A010-837	Bill	4/8/2000	X	X	X	X
109	32-V095-595	Bill	5/17/2000	X	X	X	X
118	32-V093-953	Bill	5/19/2000	X	X	X	X
120	32-V098-440	Bill	5/19/2000	X	X	X	X
119	32-V098-440	Bill	5/19/2000	X	X	X	X
130	32-V097-358	Bill	5/25/2000	X	X	X	X
153	32-V081-093	Bill	6/21/2000	X	X	X	X
162	32-V081-093	Bill	6/21/2000	X	X	X	X
161	32-V081-093	Bill	6/21/2000		X	X	
164	32-A013-746	Bill	6/22/2000	X	X	X	X

BUCC EVENT NO	Claims Number	MARLINS	DATE OF MARLINS	More than 30 Days Between Accident and Test	MCV	EMG	MRI
166	32-A013-746	Bill	6/22/2000	X			X
165	32-A013-746	Bill	6/22/2000	X	X	X	X
184	32-A015-606	Bill	7/14/2000	X			
185	52-2386-481	Bill	7/14/2000				X
187	32-A015-606	Bill	7/19/2000	X	X	X	X
188	32-A015-906	Bill	7/19/2000	X	X	X	
190	52-2386-461	Bill	7/19/2000	X			X
189	32-A015-606	Bill	7/19/2000	X	X	X	X
197	52-2392-737	Bill	7/21/2000				X
214	32-A016-895	Bill	8/15/2000	X	X	X	X
216	52-2392-737	Bill	8/16/2000	X			
222	32-A015-606	Bill	8/21/2000	X	X	X	X
223	32-a016-895	Bill	8/21/2000	X	X	X	X
227	32-V315-446	Bill	9/6/2000		X	X	X
245	32-A017-079	Bill	9/27/2000	X			X
257	32-A017-671	Bill	10/18/2000		X	X	

REC'D EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	NCV	ENG	MRI
266	32-A017-671	Bill	10/18/2000		X	X	
271	32-A017-079	Bill	11/16/2000	X	X	X	X
280	32-A017-945	Bill	11/30/2000	X	X	X	X
279	32-A018-894	Bill	11/30/2000		X	X	X
288	32-A017-758	Bill	12/26/2000	X			X
297	32-a017-945	Bill	1/8/2001	X			
309	32-a018-894	Bill	1/15/2001	X			
313	32-A021-203	Bill	1/19/2001		X	X	
319	32-a021-203	Bill	1/23/2001		X	X	
320	32-A017-758	Bill	1/23/2001	X	X	X	X
329	32-a020-559	Bill	2/7/2001	X	X	X	X
330	32-a020-559	Bill	2/7/2001	X			
331	32-a020-559	Bill	2/7/2001	X			
337	32-V340-887	Bill	2/16/2001		X	X	
338	32-A019-708	Bill	2/16/2001	X			X
344	32-V336-352	Bill	2/23/2001	X	X	X	

REG EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	NCV	ENG	HRI
345	32-V336-352	Bill	2/23/2001	X	X	X	
351	32-V336-352	Bill	2/28/2001	X			X
367	32-V334-388	Bill	3/19/2001	X	X	X	X
368	32-V334-388	Bill	3/19/2001	X	X	X	X
371	32-V394-735	Bill	3/22/2001		X	X	X
385	32-A022-164	Bill	4/10/2001	X	X	X	
386	32-V342-930	Bill	4/10/2001		X	X	X
390	32-A022-164	Bill	4/17/2001	X		X	X
391	32-A023-388	Bill	4/17/2001	X	X	X	
392	32-A022-575	Bill	4/26/2001	X	X	X	X
393	32-V347-599	Bill	4/26/2001	X	X	X	X
397	32-V347-599	Bill	5/3/2001	X	X	X	X
400	32-V347-599	Bill	5/10/2001	X	X	X	X
409	32-V347-599	Bill	5/30/2001	X	X	X	X
473	32-A023-388	Bill	8/8/2001	X	X	X	
475	32-V359-508	Bill	8/10/2001				X

RUCO EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	NCV	ENG	MRI
476	32-A024-601	Bill	8/10/2001	X	X	X	X
488	32-A021-008	Bill	8/23/2001	X	X	X	X
500	32-A025-572	Bill	9/22/2001	X	X	X	X
498	32-A025-572	Bill	9/22/2001	X	X	X	X
499	52-2491-705	Bill	9/22/2001	X			X
501	52-2491-705	Bill	9/22/2001	X			X
497	52-2491-705	Bill	9/22/2001	X			X
502	52-2491-705	Bill	9/24/2001	X			X
503	52-2502-509	Bill	9/26/2001	X	X	X	X
504	52-2502-509	Bill	9/26/2001		X	X	X
507	32-V374-861	Bill	9/28/2001		X	X	X
509	52-2502-509	Bill	9/29/2001	X	X	X	
508	32-V377-840	Bill	9/29/2001				X
526	32-V374-861	Bill	10/18/2001	X	X	X	X
524	32-V384-020	Bill	10/18/2001	X	X	X	X
525	32-V364-020	Bill	10/18/2001	X			X

RICO EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	NCV	EMG	MRI
594	52-2502-509	Bill	1/9/2002	X	X	X	
595	32-V377-840	Bill	1/9/2002	X	X		X
609	32-a030-956	Bill	1/31/2002	X	X	X	X
608	32-a030-956	Bill	1/31/2002	X	X	X	
613	32-A029-782	Bill	2/6/2002		X	X	X
614	32-A029-761	Bill	2/6/2002		X	X	X
615	32-A029-761	Bill	2/7/2002	X	X	X	X
621	32-a029-923	Bill	2/14/2002	X	X	X	
645	32-A030-819	Bill	3/25/2002		X	X	
646	32-a030-819	Bill	3/25/2002		X	X	
659	32-V403-442	Bill	4/15/2002		X	X	
660	32-V403-442	Bill	4/15/2002	X	X	X	
673	32-A030-819	Bill	5/23/2002	X			

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BICO EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	NCV	ENG	MRI
333	32-A019-765	Bill	2/9/2001	X	X	X	X
339	32-V334-588	Bill	2/19/2001	X	X	X	X
346	32-A019-763	Bill	2/26/2001	X	X	X	X
347	32-A019-765	Bill	2/26/2001	X	X	X	X
348	32-V334-588	Bill	2/26/2001	X	X	X	X
352	32-A020-807	Bill	2/28/2001	X			X
353	32-A020-807	Bill	2/28/2001	X			X
369	32-V337-883	Bill	3/19/2001	X	X	X	X
376	32-V337-883	Bill	3/26/2001	X	X	X	X
377	32-V343-483	Bill	3/26/2001	X			X
381	32-A020-807	Bill	4/5/2001	X			X
382	32-A020-807	Bill	4/5/2001	X			X
383	32-A020-807	Bill	4/5/2001	X			
384	32-V341-520	Bill	4/27/2001	X	X	X	

FINCO EVENT NO	Claim Number	HEARING	DATE OF HEARING	More than 30 Days Between Accident and Test	NCV	ENG	MRI
398	32-V341-520	Bill	5/3/2001	X	X	X	
444	32-V352-513	Bill	7/6/2001				X
453	32-V360-472	Bill	7/20/2001				X
454	32-V360-472	Bill	7/20/2001	X			X
477	32-V360-005	Bill	8/10/2001	X	X	X	X
478	32-V360-472	Bill	8/13/2001		X	X	X
479	32-V360-472	Bill	8/13/2001	X			X
491	32-V360-472	Bill	9/10/2001	X			X
492	32-5596-501	Bill	9/10/2001	X	X	X	X
493	32-V360-005	Bill	9/10/2001	X	X	X	X
505	32-5596-501	Bill	9/26/2001	X	X	X	X
506	32-V360-472	Bill	9/26/2001				X
516	32-V369-310	Bill	10/8/2001	X	X	X	
517	32-V369-681	Bill	10/8/2001	X	X	X	
518	32-A025-553	Bill	10/8/2001	X	X	X	X
519	32-V371-717	Bill	10/8/2001	X	X	X	

RICO EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	NCV	ENG	MRI
520	32-V371-717	Bill	10/8/2001		X	X	X
522	32-V373-976	Bill	10/9/2001			X	X
550	32-V374-877	Bill	11/12/2001	X	X	X	
551	32-V375-450	Bill	11/12/2001	X	X	X	X
552	32-V373-976	Bill	11/13/2001	X		X	X
553	32-V383-691	Bill	11/14/2001	X		X	X
559	32-A024-586	Bill	11/28/2001	X			X
593	32-A028-400	Bill	1/8/2002	X			X
596	32-V388-383	Bill	1/21/2002	X	X	X	X
603	32-A028-400	Bill	1/28/2002	X			
605	32-A030-111	Bill	1/30/2002	X	X	X	X
606	32-V375-450	Bill	1/30/2002	X			
610	32-V386-522	Bill	2/1/2002	X	X	X	X
611	32-V388-586	Bill	2/1/2002	X			
616	32-V392-075	Bill	2/7/2002	X	X	X	
617	32-V397-901	Bill	2/7/2002	X	X		X

RUCO EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	MCV	EMS	MBI
618	32-V386-586	Bill	2/8/2002	X			
650	32-V396-038	Bill	4/8/2002	X			X
651	32-V396-038	Bill	4/8/2002	X			X
652	32-V396-038	Bill	4/8/2002	X		X	X
653	32-A030-111	Bill	4/8/2002	X			
654	32-V386-522	Bill	4/8/2002	X			
956	32-V369-681	Bill	11/13/2003	X	X	X	

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RICO EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	NCV	ENG	MIRI
70	32-A011-570	Bill	2/9/2000	X		X	
76	32-A011-570	Bill	2/23/2000	X			
122	32-A013-817	Bill	5/22/2000	X			
123	32-A014-257	Bill	5/22/2000	X	X	X	
124	32-A013-817	Bill	5/22/2000	X		X	X
125	32-V095-392	Bill	5/23/2000	X	X	X	X
140	32-V097-590	Bill	6/2/2000	X	X	X	X
167	32-V080-326	Bill	6/26/2000	X	X	X	
168	32-A011-433	Bill	6/26/2000	X	X	X	X
169	32-V080-326	Bill	6/26/2000	X		X	
170	32-V080-326	Bill	6/26/2000	X			
173	32-V073-299	Bill	7/5/2000	X		X	X
174	32-V085-698	Bill	7/5/2000	X			X
208	32-A016-176	Bill	8/2/2000	X	X	X	X

RICO EVENT NO	Claim Number	MALERS	DATE OF MALERS	More than 30 Days Between Accident and Test	MCV	ENG	MBE
217	32-A015-958	Bill	8/16/2000		X	X	X
228	32-V304-319	Bill	9/6/2000	X		X	X
230	32-A016-983	Bill	9/12/2000				
231	32-A016-983	Bill	9/12/2000	X			
234	32-A016-945	Bill	9/19/2000	X	X	X	X
235	32-V312-127	Bill	9/20/2000				X
236	32-V312-127	Bill	9/20/2000				
238	32-A016-983	Bill	9/21/2000	X			
239	32-A016-983	Bill	9/21/2000				
240	32-A016-945	Bill	9/22/2000	X	X	X	X
241	32-A015-958	Bill	9/22/2000	X	X	X	
246	32-V307-058	Bill	9/28/2000	X			X
258	32-A016-897	Bill	10/16/2000	X		X	X
285	32-A018-769	Bill	12/16/2000		X	X	X
289	32-V323-833	Bill	12/28/2000		X	X	X
305	32-A018-349	Bill	1/12/2001	X			

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RICO EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	NCV	ENG	MRI
604	32-V399-037	Bill	1/28/2002	X	X	X	X
626	32-A032-307	Bill	3/2/2002	X	X	X	X
649	32-A032-307	Bill	4/2/2002	X	X	X	X
658	32-V389-401	Bill	4/11/2002	X	X	X	X
717	32-A033-323	Bill	7/9/2002	X	X	X	X
723	32-V406-772	Bill	7/10/2002	X			
737	32-V408-549	Bill	7/16/2002	X	X	X	X
738	32-V408-549	Bill	7/16/2002	X	X	X	
794	32-A038-635	Bill	8/9/2002	X	X	X	X
796	32-A033-323	Bill	8/12/2002	X			X
797	32-V399-037	Bill	8/12/2002	X	X	X	X
814	32-A038-635	Bill	8/29/2002	X			X
826	32-A048-635	Bill	9/10/2002	X	X	X	X
827	32-A038-635	Bill	9/10/2002	X	X	X	X

RCO EVENT NO	Claim Number	HEALING	DATE OF HEALING	More than 30 Days Between Accident and Test	NEW	ENG	MRI
828	32-A038-635	Bill	9/10/2002	X	X	X	X
829	32-A038-635	Bill	9/10/2002		X	X	X
830	32-A038-635	Bill	9/10/2002	X	X	X	X
831	32-a038-691	Bill	9/11/2002	X	X	X	
832	32-A039-276	Bill	9/12/2002	X	X	X	X
864	32-A039-993	Bill	10/11/2002		X		
885	32-A039-993	Bill	10/11/2002	X	X	X	X
906	32-a040-592	Bill	10/25/2002	X		X	X
907	32-a040-592	Bill	10/25/2002	X	X	X	X
908	32-A040-803	Bill	10/25/2002	X			X
930	32-A038-635	Bill	11/2/2002	X	X	X	X
931	32-a040-592	Bill	11/3/2002		X	X	
932	32-a040-592	Bill	11/3/2002	X	X	X	
933	32-A040-803	Bill	11/3/2002	X			
934	32-a041-010	Bill	11/3/2002		X	X	
946	32-A039-993	Bill	11/15/2002	X			X

RICO EVENT NO	Claim Number	MAILINGS	DATE OF MAILING	More than 30 Days Between Accident and Test	NCV	EMG	MRI
947	32-A039-993	Bill	11/15/2002	X		X	
948	32-V436-790	Bill	11/18/2002		X	X	
949	32-a041-010	Bill	11/18/2002		X	X	
952	32-V441-420	Bill	11/21/2002	X	X	X	X

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RECO EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	NCV	EMG	MRI
108	32-V097-245	Bill	5/16/2000	X			X
135	32-V097-245	Bill	5/30/2000	X			X
148	32-V097-245	Bill	6/12/2000	X			X
160	32-A015-468	Bill	6/20/2000			X	X
171	32-A016-500	Bill	6/26/2000				X
177	32-V087-749	Bill	7/12/2000	X	X	X	X
178	32-V087-749	Bill	7/12/2000	X	X	X	X
180	32-A016-080	Bill	7/13/2000				
181	32-V306-535	Bill	7/13/2000	X	X	X	
182	32-A016-080	Bill	7/13/2000				
183	32-A016-080	Bill	7/13/2000				
198	32-A016-500	Bill	7/21/2000		X	X	X
199	32-V087-749	Bill	7/21/2000	X	X	X	X
209	32-A015-468	Bill	8/4/2000	X	X	X	X

RUCO EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	NCV	ENG	MRI
219	32-A016-494	Bill	8/18/2000	X	X	X	X
220	32-A016-494	Bill	8/18/2000	X	X	X	
249	32-A017-205	Bill	10/3/2000		X	X	
250	32-A017-205	Bill	10/3/2000		X	X	X
251	32-A017-205	Bill	10/3/2000		X	X	X
252	32-A017-205	Bill	10/13/2000	X	X	X	X
253	32-A017-205	Bill	10/13/2000		X	X	X
254	32-A017-919	Bill	10/17/2000		X	X	
255	32-A017-919	Bill	10/17/2000	X			X
263	32-V313-402	Bill	11/3/2000	X	X	X	X
266	32-A018-667	Bill	11/10/2000				
276	32-V319-367	Bill	11/22/2000		X	X	
277	32-V319-367	Bill	11/22/2000	X	X	X	
293	32-A019-639	Bill	1/2/2001		X	X	X
294	32-A019-639	Bill	1/2/2001		X	X	X
295	32-V325-449	Bill	1/2/2001	X			X

BJO EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	NCV	EMG	HRE
296	32-A019-639	Bill	1/2/2001		X	X	X
298	32-A019-639	Bill	1/8/2001		X	X	X
299	32-A019-638	Bill	1/8/2001		X	X	X
300	32-A019-639	Bill	1/10/2001		X	X	X
301	32-A021-230	Bill	1/10/2001	X	X	X	
314	32-A021-230	Bill	1/19/2001	X	X	X	X
321	32-A016-080	Bill	1/23/2001	X			
322	32-A021-230	Bill	1/29/2001		X	X	X
323	32-A021-230	Bill	1/29/2001		X	X	X
327	32-A020-055	Bill	2/5/2001	X	X	X	X
332	32-A021-770	Bill	2/8/2001	X	X	X	X
621	32-A019-639	Bill	10/8/2001		X	X	X
584	32-V394-455	Bill	1/3/2002	X		X	
587	32-5600-056	Bill	1/21/2002	X	X	X	X
588	32-V394-455	Bill	1/21/2002	X			
635	32-V394-455	Bill	3/14/2002	X			

RUCO EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	NEW	EMG	MRI
644	32-5600-056	Bill	3/20/2002	X	X	X	X

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REC EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	NCV	EMG	MRI
539	32-V377-995	Bill	10/25/2001	X		X	X
589	32-V384-604	Bill	1/7/2002				X
602	32-V383-713	Bill	1/23/2002	X		X	
641	32-V371-349	Bill	3/19/2002	X	X	X	
655	32-V401-150	Bill	4/8/2002	X			
656	32-V401-150	Bill	4/8/2002	X			
657	30-V501-696	Bill	4/9/2002	X			
685	32-v420-493	Bill	6/4/2002				
687	32-v420-493	Bill	6/4/2002				X
686	32-V383-713	Bill	6/4/2002	X		X	
704	32-v404-727	Bill	6/28/2002	X	X	X	
703	32-v404-727	Bill	6/28/2002	X	X	X	
750	32-5602-281	Bill	7/18/2002	X			X
793	32-5602-281	Bill	8/7/2002	X			

REG EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	MCV	ENG	MRI
818	32-V408-893	Bill	9/2/2002	X			
821	32-A038-295	Bill	9/3/2002	X	X	X	X
819	32-A038-295	Bill	9/3/2002	X	X	X	X
820	32-V436-790	Bill	9/3/2002	X	X	X	
822	32-A038-295	Bill	9/7/2002	X	X	X	
823	32-V436-790	Bill	9/7/2002	X	X	X	X
835	32-A038-488	Bill	9/12/2002	X	X	X	
850	32-5602-143	Bill	9/18/2002		X	X	X
852	32-V435-788	Bill	9/20/2002	X	X	X	
855	32-V435-788	Bill	9/21/2002	X			X
853	32-a040-813	Bill	9/21/2002				
854	32-V435-788	Bill	9/21/2002	X	X	X	
870	32-V436-611	Bill	9/30/2002				
896	32-V435-788	Bill	10/17/2002	X			
897	32-V435-788	Bill	10/17/2002	X	X	X	
920	32-V442-257	Bill	10/28/2002	X	X	X	X

REC EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	NCV	EMG	MBI
919	32-V442-257	Bill	10/28/2002		X	X	X
917	32-A035-830	Bill	10/28/2002	X			
918	32-A035-830	Bill	10/28/2002				X
926	32-a036-444	Bill	10/29/2002	X			X
925	32-V415-827	Bill	10/29/2002	X			X
927	32-V435-788	Bill	10/30/2002	X	X	X	
950	32-A035-830	Bill	11/18/2002	X			X

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RCB EVENT NO	Claim Number	MAKING	DATE OF MAKING	More than 30 Days Between Accident and Test	NCV	ENG	MRI
2	32-A000-524	Bill	4/14/1999	X	X	X	X
3	32-A002-414	Bill	4/14/1999	X	X		X
4	32-A000-524	Bill	4/14/1999	X	X	X	X
94	32-V068-554	Bill	4/7/2000				X
224	32-V090-938	Bill	8/25/2000	X	X	X	X
540	32-V345-364	Bill	10/29/2001	X			X
581	32-V368-597	Bill	12/26/2001	X			X
689	32-V405-804	Bill	6/12/2002	X	X	X	X
746	32-V424-490	Bill	7/17/2002		X		
836	32-V415-858	Bill	9/12/2002	X			X
847	32-V424-490	Bill	9/17/2002				
845	32-V422-242	Bill	9/17/2002	X			X
844	52-2596-467	Bill	9/17/2002				X
846	32-V424-490	Bill	9/17/2002	X			X

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BICO EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	MCV	ENG	MRI
875	32-V424-490	Bill	10/1/2002				
873	32-V414-602	Bill	10/1/2002		X		
874	32-V414-602	Bill	10/1/2002	X	X		
872	32-V424-490	Bill	10/1/2002				X
877	32-V415-858	Bill	10/2/2002				
889	32-V422-242	Bill	10/14/2002	X			X
892	32-V414-602	Bill	10/15/2002		X		
935	32-V443-198	Bill	11/4/2002	X			
936	32-A041-232	Bill	11/5/2002		X	X	X
937	32-a041-232	Bill	11/5/2002		X	X	

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RICO EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	NCV	ENG	MRI
549	32-A025-021	Bill	11/9/2001	X			
565	32-V378-543	Bill	12/7/2001	X	X	X	X
629	32-V381-463	Bill	3/2/2002	X			X
628	32-V378-543	Bill	3/2/2002		X	X	X
627	32-V381-463	Bill	3/2/2002	X	X	X	
747	32-A036-147	Bill	7/17/2002	X	X	X	
748	32-V411-482	Bill	7/17/2002	X	X	X	X
763	32-V411-482	Bill	7/24/2002	X	X	X	X
779	32-A036-147	Bill	7/30/2002	X	X	X	
812	32-5602-216	Bill	8/28/2002	X	X	X	
813	38-K079-952	Bill	8/28/2002	X			
816	32-V428-978	Bill	8/29/2002	X	X	X	X
815	32-V428-978	Bill	8/29/2002	X	X	X	X
817	32-A040-933	Bill	9/1/2002	X	X	X	X

RCO EVENT NO	Claim Number	MAILING	DATE OF MAILING	More than 30 Days Between Accident and Test	NCV	ENG	MIRI
825	32-V428-976	Bill	9/9/2002	X	X	X	X
848	32-V428-976	Bill	9/17/2002	X			X
829	32-A040-933	Bill	11/1/2002		X	X	
928	32-A040-933	Bill	11/1/2002	X	X	X	X
941	32-5605-204	Bill	11/5/2002	X	X	X	
940	32-5605-204	Bill	11/5/2002	X	X	X	
938	32-5605-204	Bill	11/5/2002	X			
939	32-5605-204	Bill	11/5/2002	X	X	X	
944	59-Y205-899	Bill	11/11/2002	X			X
945	32-A040-933	Bill	11/13/2002	X	X	X	
951	59-Y205-899	Bill	11/20/2002	X			X